1
00:00:16,299 --> 00:00:02,149
[Music]

2
00:00:24,040 --> 00:00:16,309
[Applause]

3
00:00:30,550 --> 00:00:24,050
[Music]

4
00:00:35,990 --> 00:00:33,110
welcome back to the UFO Rabbit Hole

5
00:00:37,850 --> 00:00:36,000
podcast I'm your host Kelly Chase

6
00:00:38,750 --> 00:00:37,860
today I'm bringing you something really

7
00:00:41,630 --> 00:00:38,760
special

8
00:00:43,190 --> 00:00:41,640
a few weeks ago Dr Diana Walsh vaselker

9
00:00:44,450 --> 00:00:43,200
reached out to connect me with someone

10
00:00:46,549 --> 00:00:44,460
she thought I might be interested in

11
00:00:48,290 --> 00:00:46,559
interviewing for the podcast her name is

12
00:00:50,209 --> 00:00:48,300
Dr IA Whiteley and she's a space

13
00:00:51,830 --> 00:00:50,219

psychologist who's featured in Diana's

14
00:00:54,470 --> 00:00:51,840
upcoming book due out in November

15
00:00:56,750 --> 00:00:54,480
entitled encounters experiences with

16
00:00:58,430 --> 00:00:56,760
non-human intelligences given the

17
00:01:00,650 --> 00:00:58,440
respect that I have for Diana and her

18
00:01:02,750 --> 00:01:00,660
work her recommendation alone would have

19
00:01:04,189 --> 00:01:02,760
been enough for me to say yes but the

20
00:01:06,289 --> 00:01:04,199
more she shared with me about Dr

21
00:01:07,969 --> 00:01:06,299
Whiteley and her work it became clear to

22
00:01:10,969 --> 00:01:07,979
me that this was an interview that I

23
00:01:12,890 --> 00:01:10,979
absolutely had to do Dr IA Whiteley is a

24
00:01:14,450 --> 00:01:12,900
training developer for astronauts for

25
00:01:16,609 --> 00:01:14,460
the background in Clinical Psychology

26
00:01:18,590 --> 00:01:16,619
and cognitive engineering

27
00:01:20,870 --> 00:01:18,600
she leverages her skills and expertise

28
00:01:23,090 --> 00:01:20,880
combined with her own insights and

29
00:01:25,969 --> 00:01:23,100
experiences as a pilot skydiver and

30
00:01:27,649 --> 00:01:25,979
scuba diver to design both equipment and

31
00:01:28,789 --> 00:01:27,659
training programs to improve the

32
00:01:30,649 --> 00:01:28,799
performance of highly trained

33
00:01:33,530 --> 00:01:30,659
Professionals in extreme environments

34
00:01:35,810 --> 00:01:33,540
including military pilots and astronauts

35
00:01:38,510 --> 00:01:35,820
she has also worked at the European

36
00:01:40,550 --> 00:01:38,520
astronaut Center in Clone Germany and

37
00:01:42,530 --> 00:01:40,560
now collaborates with NASA and the

38
00:01:45,050 --> 00:01:42,540

Gagarin Cosmonaut training center in

39
00:01:47,210 --> 00:01:45,060
Star City Russia since having her own

40
00:01:49,010 --> 00:01:47,220
children Iya has been using her unique

41
00:01:50,810 --> 00:01:49,020
skill set to work on laying the

42
00:01:53,030 --> 00:01:50,820
groundwork for a universal Earth

43
00:01:54,889 --> 00:01:53,040
language one that could potentially help

44
00:01:57,530 --> 00:01:54,899
humans communicate with non-human

45
00:02:00,109 --> 00:01:57,540
intelligences including animals and

46
00:02:02,210 --> 00:02:00,119
Beyond to this end she's designed high

47
00:02:04,609 --> 00:02:02,220
contrast black and white visual books

48
00:02:06,469 --> 00:02:04,619
for newborns and babies to help tap into

49
00:02:08,270 --> 00:02:06,479
their full developmental potential and

50
00:02:09,710 --> 00:02:08,280
give them the best possible start on our

51
00:02:12,710 --> 00:02:09,720
unique planet Earth

52
00:02:14,510 --> 00:02:12,720
in many ways Dr whiteley's career traces

53
00:02:16,010 --> 00:02:14,520
the Contours of the themes and topics

54
00:02:18,530 --> 00:02:16,020
we've been exploring over the last few

55
00:02:20,510 --> 00:02:18,540
months and yet the way that she

56
00:02:22,430 --> 00:02:20,520
innovates and problem solves Within

57
00:02:25,190 --> 00:02:22,440
These Realms and how these realities

58
00:02:26,630 --> 00:02:25,200
both impact and inform her work make

59
00:02:28,369 --> 00:02:26,640
this an extremely challenging

60
00:02:29,690 --> 00:02:28,379
conversation to frame in a meaningful

61
00:02:32,630 --> 00:02:29,700
and coherent way

62
00:02:35,330 --> 00:02:32,640
the ideas are simply too big and too new

63
00:02:37,190 --> 00:02:35,340

and frankly too important for me to feel

64
00:02:38,930 --> 00:02:37,200
comfortable wrestling them down into

65
00:02:40,970 --> 00:02:38,940
little bite-sized morsels that would

66
00:02:42,710 --> 00:02:40,980
make them easier to digest

67
00:02:45,369 --> 00:02:42,720
too much would be lost in the process

68
00:02:47,869 --> 00:02:45,379
and so I won't attempt to do so

69
00:02:49,729 --> 00:02:47,879
instead I think it's best to just let

70
00:02:52,009 --> 00:02:49,739
you listen to what Dr Whiteley has to

71
00:02:54,290 --> 00:02:52,019
say and let her words speak to whatever

72
00:02:55,610 --> 00:02:54,300
is most alive for you right now if

73
00:02:57,650 --> 00:02:55,620
there's interest I might do a short

74
00:02:59,630 --> 00:02:57,660
follow-up episode sharing my thoughts

75
00:03:01,369 --> 00:02:59,640
next week sometime and if you're a

76
00:03:03,589 --> 00:03:01,379
patron we'll definitely be discussing

77
00:03:07,009 --> 00:03:03,599
this episode in our next zoom on

78
00:03:08,750 --> 00:03:07,019
Saturday April 22nd at 3 pm Eastern but

79
00:03:11,149 --> 00:03:08,760
for now I think it's best to just let

80
00:03:13,430 --> 00:03:11,159
this conversation speak for itself

81
00:03:15,649 --> 00:03:13,440
but I will say this after we finish

82
00:03:18,290 --> 00:03:15,659
recording I went into my room and I sat

83
00:03:20,690 --> 00:03:18,300
on my bed and I just cried

84
00:03:22,910 --> 00:03:20,700
it's hard to explain why exactly but

85
00:03:25,130 --> 00:03:22,920
although sorrow was definitely a part of

86
00:03:28,369 --> 00:03:25,140
what I was feeling these weren't tears

87
00:03:29,809 --> 00:03:28,379
of sadness they were tears of relief the

88
00:03:31,910 --> 00:03:29,819

kind of tears that come when you find

89
00:03:34,490 --> 00:03:31,920
yourself unmored and adrift at Sea with

90
00:03:36,410 --> 00:03:34,500
all hope lost and then suddenly a ship

91
00:03:38,270 --> 00:03:36,420
appears in the distance

92
00:03:39,830 --> 00:03:38,280
for a long time now it's felt like

93
00:03:42,170 --> 00:03:39,840
something essential about our world as

94
00:03:44,149 --> 00:03:42,180
we know it is unraveling it started

95
00:03:46,309 --> 00:03:44,159
slowly at first gained steamed gradually

96
00:03:47,990 --> 00:03:46,319
over decades until reaching a crescendo

97
00:03:50,270 --> 00:03:48,000
over the last few years

98
00:03:52,130 --> 00:03:50,280
the reality of UFO phenomenon is just

99
00:03:53,750 --> 00:03:52,140
one of many existential issues that

100
00:03:56,089 --> 00:03:53,760
Humanity finds itself confronted with

101
00:03:57,770 --> 00:03:56,099
and many people have this sense that

102
00:03:59,809 --> 00:03:57,780
we've already passed some invisible

103
00:04:01,610 --> 00:03:59,819
Tipping Point and that many of the

104
00:04:03,470 --> 00:04:01,620
institutions from which we derive our

105
00:04:05,690 --> 00:04:03,480
sense of safety and meaning might be

106
00:04:07,490 --> 00:04:05,700
Beyond repair and that can be a

107
00:04:09,949 --> 00:04:07,500
terrifying thought but it's through the

108
00:04:10,970 --> 00:04:09,959
work of people like IA and Diana that I

109
00:04:13,789 --> 00:04:10,980
find Hope

110
00:04:16,009 --> 00:04:13,799
yes things are falling apart but in

111
00:04:17,930 --> 00:04:16,019
their place our emerging astonishing and

112
00:04:20,569 --> 00:04:17,940
beautiful new possibilities and ways of

113
00:04:22,670 --> 00:04:20,579

being a caterpillar in her cocoon only

114
00:04:24,230 --> 00:04:22,680
thinks the world is ending because she

115
00:04:26,570 --> 00:04:24,240
can't yet Envision the butterfly that

116
00:04:29,150 --> 00:04:26,580
she will become she can't see the secret

117
00:04:31,010 --> 00:04:29,160
magic that's always been hers Humanity

118
00:04:33,469 --> 00:04:31,020
seems to be passing through a similar

119
00:04:35,570 --> 00:04:33,479
transformational portal one that is both

120
00:04:37,730 --> 00:04:35,580
an end and a beginning and that will

121
00:04:40,070 --> 00:04:37,740
fundamentally change who we are both as

122
00:04:42,110 --> 00:04:40,080
individuals and as a species

123
00:04:43,610 --> 00:04:42,120
it can be hard to understand what that

124
00:04:45,590 --> 00:04:43,620
means or to Grapple with the full

125
00:04:47,390 --> 00:04:45,600
implications if you find yourself

126
00:04:49,969 --> 00:04:47,400
struggling with that you're not alone

127
00:04:51,890 --> 00:04:49,979
I'm right there with you and I hope this

128
00:04:53,870 --> 00:04:51,900
conversation will speak to you in the

129
00:04:55,969 --> 00:04:53,880
way that it spoke to me

130
00:04:57,409 --> 00:04:55,979
in a conversation I had once with Diana

131
00:04:59,390 --> 00:04:57,419
she said in reference to the

132
00:05:01,310 --> 00:04:59,400
extraordinary people and ideas that she

133
00:05:03,110 --> 00:05:01,320
has encountered in her work that she

134
00:05:05,570 --> 00:05:03,120
sometimes feels like she's living in the

135
00:05:08,030 --> 00:05:05,580
future and that was the exact sense that

136
00:05:10,189 --> 00:05:08,040
I had in this conversation that I was

137
00:05:12,950 --> 00:05:10,199
speaking to two people whose combination

138
00:05:15,710 --> 00:05:12,960

of deep expertise and carefully honed

139
00:05:18,230 --> 00:05:15,720
intuition have given them a rare glimpse

140
00:05:20,090 --> 00:05:18,240
of the shape of our future as a species

141
00:05:21,710 --> 00:05:20,100
something that can be difficult if not

142
00:05:23,570 --> 00:05:21,720
outright impossible to see when we're

143
00:05:26,090 --> 00:05:23,580
embedded in our ordinary everydayness

144
00:05:27,770 --> 00:05:26,100
I'd like to thank Diana for making this

145
00:05:29,450 --> 00:05:27,780
connection for helping to shape this

146
00:05:31,790 --> 00:05:29,460
conversation and for serving as a

147
00:05:33,529 --> 00:05:31,800
co-host for this episode and a huge

148
00:05:34,909 --> 00:05:33,539
thank you to Dr eel Whiteley for

149
00:05:36,830 --> 00:05:34,919
Patiently working through my questions

150
00:05:39,170 --> 00:05:36,840
and for allowing me to share this

151
00:05:41,029 --> 00:05:39,180
beautiful story with the world it's

152
00:05:43,850 --> 00:05:41,039
truly an honor

153
00:05:47,510 --> 00:05:43,860
here is my interview with Dr IA Whiteley

154
00:05:50,090 --> 00:05:47,520
featuring Dr Diana Walsh pasilka

155
00:05:53,090 --> 00:05:50,100
talk to you a little bit about how you

156
00:05:55,909 --> 00:05:53,100
came in contact with Dr Whiteley and her

157
00:05:57,170 --> 00:05:55,919
work and why it's been so important to

158
00:05:58,790 --> 00:05:57,180
the work that you've been doing with

159
00:06:02,330 --> 00:05:58,800
your next book

160
00:06:05,570 --> 00:06:02,340
sure so after American Cosmic was

161
00:06:07,689 --> 00:06:05,580
published Dr Whiteley contacted me and

162
00:06:11,210 --> 00:06:07,699
she was doing some research in this area

163
00:06:14,330 --> 00:06:11,220

and because of her position as a space

164
00:06:15,830 --> 00:06:14,340
psychologist and the specific types of

165
00:06:18,350 --> 00:06:15,840
things she was doing I was really

166
00:06:21,110 --> 00:06:18,360
excited to make her acquaintance and

167
00:06:26,809 --> 00:06:21,120
immediately saw that this was important

168
00:06:28,969 --> 00:06:26,819
basically for UFO and UAP research so I

169
00:06:31,010 --> 00:06:28,979
actually used her to the people that I

170
00:06:34,249 --> 00:06:31,020
knew my network relayed her information

171
00:06:36,890 --> 00:06:34,259
to people like Jacques valet and and

172
00:06:37,850 --> 00:06:36,900
Gary Nolan and even people that are in

173
00:06:40,370 --> 00:06:37,860
my book

174
00:06:43,430 --> 00:06:40,380
so basically Dr whiteley's work in

175
00:06:47,210 --> 00:06:43,440
aviation his spanned 20 years and she

176
00:06:50,570 --> 00:06:47,220
was one of a few researchers who changed

177
00:06:53,749 --> 00:06:50,580
the culture of pilot reporting of things

178
00:06:56,330 --> 00:06:53,759
like aerial phenomena and there's a huge

179
00:06:58,969 --> 00:06:56,340
overlap between pilots and astronauts

180
00:07:02,150 --> 00:06:58,979
and there are of course significant

181
00:07:04,670 --> 00:07:02,160
differences between the communities but

182
00:07:07,309 --> 00:07:04,680
they both are in a unique position to

183
00:07:10,249 --> 00:07:07,319
see aerial phenomenon each of them

184
00:07:13,070 --> 00:07:10,259
though is trained differently so Dr

185
00:07:16,790 --> 00:07:13,080
whiteley's research focused on the

186
00:07:18,950 --> 00:07:16,800
culture of reporting for pilots and it

187
00:07:20,629 --> 00:07:18,960
was actually a culture of like blame and

188
00:07:22,730 --> 00:07:20,639

shame Pilots were discouraged from

189
00:07:25,629 --> 00:07:22,740
reporting aerial phenomena so she

190
00:07:29,570 --> 00:07:25,639
developed techniques and actually

191
00:07:31,189 --> 00:07:29,580
Technologies to help with pilots in

192
00:07:33,230 --> 00:07:31,199
their reporting so she'll talk about

193
00:07:36,050 --> 00:07:33,240
that so that's how that's what she's

194
00:07:38,570 --> 00:07:36,060
doing she's moving that type of research

195
00:07:41,089 --> 00:07:38,580
into the culture now of UAP reporting

196
00:07:43,430 --> 00:07:41,099
which is huge for both astronauts and

197
00:07:45,290 --> 00:07:43,440
Pilots so people that are out there and

198
00:07:47,870 --> 00:07:45,300
in this unique position to witness

199
00:07:49,909 --> 00:07:47,880
things she's streamlining that process

200
00:07:52,969 --> 00:07:49,919
or helping you streamline that process

201
00:07:54,830 --> 00:07:52,979
is an ongoing process secondly part of

202
00:07:58,670 --> 00:07:54,840
our research that I found even more

203
00:08:01,430 --> 00:07:58,680
fascinating was her development of a

204
00:08:03,710 --> 00:08:01,440
contact with other species other than

205
00:08:06,469 --> 00:08:03,720
you know our species and this is the

206
00:08:09,050 --> 00:08:06,479
work that she does on Earth languages so

207
00:08:12,050 --> 00:08:09,060
I think that both of these are very

208
00:08:14,450 --> 00:08:12,060
relevant to the ongoing development of

209
00:08:17,029 --> 00:08:14,460
UAP and UFO research

210
00:08:19,610 --> 00:08:17,039
that's absolutely fascinating so Dr

211
00:08:22,550 --> 00:08:19,620
Whiteley I'd love to just dive into some

212
00:08:25,369 --> 00:08:22,560
questions with you so first of all how

213
00:08:28,550 --> 00:08:25,379

do you become a space psychologist

214
00:08:31,810 --> 00:08:28,560
my interest in base psychology came from

215
00:08:34,730 --> 00:08:31,820
how do people adapt to

216
00:08:36,409 --> 00:08:34,740
extreme environments and what kind of

217
00:08:39,230 --> 00:08:36,419
abilities arise

218
00:08:41,930 --> 00:08:39,240
as we are faced with difficulties

219
00:08:44,870 --> 00:08:41,940
and I'm particularly interested

220
00:08:47,449 --> 00:08:44,880
in something that we uncover about

221
00:08:48,889 --> 00:08:47,459
ourselves when we are faced with

222
00:08:51,350 --> 00:08:48,899
unexpected

223
00:08:55,190 --> 00:08:51,360
even if we train for it

224
00:08:58,910 --> 00:08:55,200
and that kind of is the Cornerstone of

225
00:09:01,370 --> 00:08:58,920
my research and work and that's why I

226
00:09:04,009 --> 00:09:01,380
went into Aviation psychology to start

227
00:09:05,930 --> 00:09:04,019
with knowing that that would lead to

228
00:09:08,750 --> 00:09:05,940
space psychology

229
00:09:10,910 --> 00:09:08,760
because there wasn't a profession in

230
00:09:13,250 --> 00:09:10,920
space psychology that you could follow

231
00:09:14,509 --> 00:09:13,260
the path so there's no degree in space

232
00:09:18,350 --> 00:09:14,519
psychology

233
00:09:20,750 --> 00:09:18,360
and so you just pick a direction that

234
00:09:22,550 --> 00:09:20,760
gets you closer and closer to working

235
00:09:26,030 --> 00:09:22,560
with people

236
00:09:28,910 --> 00:09:26,040
in space and Aviation and Military

237
00:09:30,829 --> 00:09:28,920
pilots and anything to do with safety

238
00:09:33,590 --> 00:09:30,839

extreme environments

239
00:09:35,509 --> 00:09:33,600
abilities to perform better

240
00:09:38,110 --> 00:09:35,519
is the direction that I've been taking

241
00:09:41,570 --> 00:09:38,120
and sort of methodically selecting

242
00:09:43,850 --> 00:09:41,580
projects and to accommodate my interests

243
00:09:46,790 --> 00:09:43,860
on how to support people and what people

244
00:09:48,710 --> 00:09:46,800
I keep or often we don't expect that

245
00:09:50,630 --> 00:09:48,720
we're able to and then

246
00:09:52,550 --> 00:09:50,640
we're surprised and then we also

247
00:09:54,590 --> 00:09:52,560
investigate why that happened how that

248
00:09:57,530 --> 00:09:54,600
happened and we don't understand a lot

249
00:10:00,230 --> 00:09:57,540
in that domain of why things happen and

250
00:10:01,610 --> 00:10:00,240
why we know things even professional

251
00:10:04,130 --> 00:10:01,620
intuition

252
00:10:05,870 --> 00:10:04,140
was it a boot topic when I began and it

253
00:10:09,170 --> 00:10:05,880
slowly became

254
00:10:12,530 --> 00:10:09,180
something that we now look into deeper

255
00:10:14,509 --> 00:10:12,540
so it's not intuition is now not a

256
00:10:16,130 --> 00:10:14,519
Forbidden World in science

257
00:10:19,009 --> 00:10:16,140
we look into it from different

258
00:10:22,930 --> 00:10:19,019
directions with different tools

259
00:10:26,930 --> 00:10:22,940
and I think that what makes an expert

260
00:10:29,630 --> 00:10:26,940
because they kind of have this knowledge

261
00:10:31,550 --> 00:10:29,640
embedded somewhere that they treasure

262
00:10:33,410 --> 00:10:31,560
and a lot of the times unable to

263
00:10:35,930 --> 00:10:33,420

articulate and that's what I'm

264
00:10:38,810 --> 00:10:35,940
interested is how to help people Express

265
00:10:41,570 --> 00:10:38,820
their expertise in the way that it's

266
00:10:44,269 --> 00:10:41,580
helpful for other experts to process but

267
00:10:46,670 --> 00:10:44,279
also for that person to understand that

268
00:10:50,269 --> 00:10:46,680
what they know is not known to other

269
00:10:52,250 --> 00:10:50,279
experts which is very frequently

270
00:10:54,170 --> 00:10:52,260
a failure I would say you know a

271
00:10:56,389 --> 00:10:54,180
positive failure of experts that they

272
00:10:58,130 --> 00:10:56,399
don't know what they the amount of

273
00:11:00,650 --> 00:10:58,140
information they know and how important

274
00:11:02,870 --> 00:11:00,660
it is to share they assume that if they

275
00:11:04,130 --> 00:11:02,880
know everybody else does and that's not

276
00:11:06,110 --> 00:11:04,140
the case

277
00:11:07,970 --> 00:11:06,120
that's so interesting I feel like I can

278
00:11:10,130 --> 00:11:07,980
see that even in my own professional

279
00:11:13,130 --> 00:11:10,140
experience what you're talking about

280
00:11:14,329 --> 00:11:13,140
that people will have in tuition about

281
00:11:16,190 --> 00:11:14,339
something but have a hard time

282
00:11:18,769 --> 00:11:16,200
articulating it and then it's hard to

283
00:11:20,509 --> 00:11:18,779
get consensus and support within the

284
00:11:22,190 --> 00:11:20,519
organization and I can only imagine how

285
00:11:24,530 --> 00:11:22,200
much harder that must be in these

286
00:11:26,329 --> 00:11:24,540
extreme environments I really respect

287
00:11:28,190 --> 00:11:26,339
that you don't just think about these

288
00:11:30,710 --> 00:11:28,200

things theoretically but that you are a

289
00:11:32,509 --> 00:11:30,720
pilot and a scuba diver and a skydiver

290
00:11:33,949 --> 00:11:32,519
and so you aren't just thinking about

291
00:11:36,470 --> 00:11:33,959
these things theoretically you're

292
00:11:38,930 --> 00:11:36,480
engaging with extreme environments while

293
00:11:40,310 --> 00:11:38,940
you're also learning about them so I was

294
00:11:42,530 --> 00:11:40,320
wondering if you could talk a little bit

295
00:11:44,030 --> 00:11:42,540
for people who maybe could don't Skydive

296
00:11:45,230 --> 00:11:44,040
and that sort of thing you know what are

297
00:11:47,810 --> 00:11:45,240
the things that you can learn about

298
00:11:49,850 --> 00:11:47,820
extreme environments by engaging with

299
00:11:51,110 --> 00:11:49,860
them that you can't learn in any other

300
00:11:54,590 --> 00:11:51,120
way

301
00:11:56,810 --> 00:11:54,600
this is very pertinent question you know

302
00:11:58,910 --> 00:11:56,820
to understand our thought processing

303
00:12:00,590 --> 00:11:58,920
also

304
00:12:02,030 --> 00:12:00,600
I think understanding our thought

305
00:12:05,690 --> 00:12:02,040
process

306
00:12:07,190 --> 00:12:05,700
is the key to appreciating what the

307
00:12:10,550 --> 00:12:07,200
expertise are

308
00:12:12,170 --> 00:12:10,560
and so there's two aspects to engaging

309
00:12:14,509 --> 00:12:12,180
through the experience as an

310
00:12:16,370 --> 00:12:14,519
investigator or researcher yourself you

311
00:12:17,810 --> 00:12:16,380
know a person who is interested to know

312
00:12:21,170 --> 00:12:17,820
more

313
00:12:23,449 --> 00:12:21,180

for one apprenticeship has been always

314
00:12:26,210 --> 00:12:23,459
an amazing way to get into a profession

315
00:12:28,069 --> 00:12:26,220
because you're working side by side with

316
00:12:31,130 --> 00:12:28,079
someone and you're experiencing and

317
00:12:33,110 --> 00:12:31,140
you're learning sometimes I would say in

318
00:12:35,569 --> 00:12:33,120
more in-depth and you build a better

319
00:12:37,790 --> 00:12:35,579
Foundation that when you go through

320
00:12:39,769 --> 00:12:37,800
theoretical when you go through a

321
00:12:40,850 --> 00:12:39,779
theoretical work at the University for

322
00:12:43,910 --> 00:12:40,860
example

323
00:12:45,889 --> 00:12:43,920
because you are watching the process so

324
00:12:47,170 --> 00:12:45,899
you engaged and you almost connect with

325
00:12:50,329 --> 00:12:47,180
an expert

326
00:12:53,210 --> 00:12:50,339
and you are able to pick up I think more

327
00:12:57,829 --> 00:12:53,220
than what they just do or say

328
00:13:00,230 --> 00:12:57,839
and so for me to understand why people

329
00:13:02,269 --> 00:13:00,240
put themselves into extreme environments

330
00:13:05,449 --> 00:13:02,279
was important

331
00:13:08,329 --> 00:13:05,459
so hence going for scuba diving or

332
00:13:10,930 --> 00:13:08,339
rescue scuba diving training as well as

333
00:13:14,629 --> 00:13:10,940
skydiving because I wanted to understand

334
00:13:17,329 --> 00:13:14,639
what happens in those milliseconds when

335
00:13:20,150 --> 00:13:17,339
you have to make a decision you know do

336
00:13:22,430 --> 00:13:20,160
you jump at all and you happy with the

337
00:13:24,829 --> 00:13:22,440
parachute that you've packed or do you

338
00:13:27,170 --> 00:13:24,839

rely on other people packing your

339
00:13:29,870 --> 00:13:27,180
parachute and you're okay with that

340
00:13:32,449 --> 00:13:29,880
because we all make mistakes human error

341
00:13:34,389 --> 00:13:32,459
is something that we cannot avoid we get

342
00:13:37,310 --> 00:13:34,399
distracted we

343
00:13:39,769 --> 00:13:37,320
missteps we process something else and

344
00:13:40,970 --> 00:13:39,779
don't notice and then with all good

345
00:13:43,730 --> 00:13:40,980
intention

346
00:13:45,710 --> 00:13:43,740
it's not something that we are free from

347
00:13:47,629 --> 00:13:45,720
you know errors that we make

348
00:13:51,530 --> 00:13:47,639
so it's important that we learn from it

349
00:13:53,810 --> 00:13:51,540
important that we concentrate and uh be

350
00:13:57,530 --> 00:13:53,820
aware sort of become observers of our

351
00:13:59,990 --> 00:13:57,540
own work so they oh come up less if you

352
00:14:02,629 --> 00:14:00,000
wish or just we can backtrack if we made

353
00:14:06,050 --> 00:14:02,639
an error and understand what led to it

354
00:14:08,990 --> 00:14:06,060
from our kind of lesson perspective

355
00:14:11,389 --> 00:14:09,000
so when I was skydiving it's the

356
00:14:14,269 --> 00:14:11,399
decisions that you make you can be in

357
00:14:16,970 --> 00:14:14,279
the aircraft and not jail right no one

358
00:14:18,769 --> 00:14:16,980
is pushing you out in principle okay

359
00:14:21,170 --> 00:14:18,779
okay well there is a situation where you

360
00:14:24,110 --> 00:14:21,180
have to jump because if you're on the

361
00:14:26,030 --> 00:14:24,120
line you know of other people jumping

362
00:14:27,350 --> 00:14:26,040
behind you you will stop everybody else

363
00:14:29,870 --> 00:14:27,360

because

364
00:14:32,569 --> 00:14:29,880
of the way you exit is your pair should

365
00:14:34,970 --> 00:14:32,579
open eyes connected to the line but in

366
00:14:37,310 --> 00:14:34,980
principle I would sit in very packed and

367
00:14:40,189 --> 00:14:37,320
cramped aircraft where we're sitting

368
00:14:43,550 --> 00:14:40,199
with each other's on our bottoms with

369
00:14:45,050 --> 00:14:43,560
our knees right up close to us and a

370
00:14:47,329 --> 00:14:45,060
person in front of you you could see

371
00:14:49,850 --> 00:14:47,339
their parachute and you also inspect it

372
00:14:51,710 --> 00:14:49,860
you make sure that inspecting your

373
00:14:53,689 --> 00:14:51,720
equipment You're Expecting someone

374
00:14:56,030 --> 00:14:53,699
forward and you're making sure that

375
00:14:57,710 --> 00:14:56,040
everything is intact and correct nothing

376
00:14:59,870 --> 00:14:57,720
is misplaced and you're kind of going

377
00:15:02,329 --> 00:14:59,880
through that process and the other thing

378
00:15:06,170 --> 00:15:02,339
that you should be doing ideally that is

379
00:15:08,509 --> 00:15:06,180
helpful is you are processing in your

380
00:15:11,030 --> 00:15:08,519
mind you're going through what you will

381
00:15:12,110 --> 00:15:11,040
do as it happens and what are the

382
00:15:14,329 --> 00:15:12,120
alternatives

383
00:15:16,069 --> 00:15:14,339
and as you process it in your mind the

384
00:15:19,069 --> 00:15:16,079
research actually shows that you could

385
00:15:22,670 --> 00:15:19,079
be playing a piano tune for example on a

386
00:15:24,829 --> 00:15:22,680
piano and by doing it mentally you

387
00:15:26,990 --> 00:15:24,839
actually your there's activation in your

388
00:15:29,870 --> 00:15:27,000

muscles and your fingers

389
00:15:32,030 --> 00:15:29,880
so this is actually you you develop

390
00:15:34,250 --> 00:15:32,040
muscle memory by just thinking through

391
00:15:36,230 --> 00:15:34,260
it so this is incredible

392
00:15:37,970 --> 00:15:36,240
and so as I'm sitting in the aircraft I

393
00:15:40,370 --> 00:15:37,980
watch other people and some people sit

394
00:15:43,009 --> 00:15:40,380
face to you and some with their back and

395
00:15:45,650 --> 00:15:43,019
I watch this gentleman and not only one

396
00:15:47,569 --> 00:15:45,660
and their teeth shuttering they're

397
00:15:50,150 --> 00:15:47,579
shuttering so much that with an open

398
00:15:52,129 --> 00:15:50,160
door so when your light in a light

399
00:15:54,410 --> 00:15:52,139
aircraft the door is open because there

400
00:15:57,350 --> 00:15:54,420
is nowhere to put the door or you can't

401
00:15:58,430 --> 00:15:57,360
open the door as the aircraft is flying

402
00:16:00,829 --> 00:15:58,440
because

403
00:16:04,129 --> 00:16:00,839
there's nowhere to put it you know so

404
00:16:06,170 --> 00:16:04,139
you depart within a door open and it's

405
00:16:08,210 --> 00:16:06,180
also unsettling just especially if you

406
00:16:10,910 --> 00:16:08,220
sit by the exit and you know that your

407
00:16:14,329 --> 00:16:10,920
parachute won't open if you fall out not

408
00:16:16,129 --> 00:16:14,339
in the altitude so there's there's no

409
00:16:18,949 --> 00:16:16,139
space for us so you kind of you hold on

410
00:16:21,530 --> 00:16:18,959
for dear life literally

411
00:16:24,110 --> 00:16:21,540
and and then you watch others on how

412
00:16:25,490 --> 00:16:24,120
they react and I would wonder why would

413
00:16:28,490 --> 00:16:25,500

they do that you know they're terrified

414
00:16:31,250 --> 00:16:28,500
they're absolutely terrified because if

415
00:16:33,590 --> 00:16:31,260
they count physically stop their jaw or

416
00:16:35,870 --> 00:16:33,600
shuddering what would go through a

417
00:16:39,110 --> 00:16:35,880
person's mind to do it and I would ask

418
00:16:41,449 --> 00:16:39,120
those questions and generally is people

419
00:16:42,829 --> 00:16:41,459
trying to pass the fear of some sort

420
00:16:44,449 --> 00:16:42,839
that they have anyway

421
00:16:46,189 --> 00:16:44,459
they want to prove something to

422
00:16:49,069 --> 00:16:46,199
themselves so they could do it despite

423
00:16:52,850 --> 00:16:49,079
it sometimes they do it as a bet

424
00:16:55,730 --> 00:16:52,860
sometimes they do it to find out to

425
00:16:58,310 --> 00:16:55,740
discover something about themselves to

426
00:17:00,710 --> 00:16:58,320
and it's interesting why people would go

427
00:17:02,329 --> 00:17:00,720
into the situation being completely

428
00:17:08,270 --> 00:17:02,339
frightened

429
00:17:10,090 --> 00:17:08,280
of there's many options of course but I

430
00:17:13,610 --> 00:17:10,100
would say two extreme options is when

431
00:17:16,669 --> 00:17:13,620
you become irrational so you'll become

432
00:17:18,429 --> 00:17:16,679
in a tunnel vision so you're unable to

433
00:17:20,750 --> 00:17:18,439
make to take in other information

434
00:17:24,110 --> 00:17:20,760
because you're kind of in survival mode

435
00:17:25,549 --> 00:17:24,120
and your resources shrink to just to

436
00:17:27,770 --> 00:17:25,559
make sure that

437
00:17:30,710 --> 00:17:27,780
but you don't die like it's what's the

438
00:17:33,169 --> 00:17:30,720

most optimal way to to reach the target

439
00:17:35,870 --> 00:17:33,179
but on the other hand many other

440
00:17:39,409 --> 00:17:35,880
resources open up and some people have a

441
00:17:42,590 --> 00:17:39,419
vision that opens up or they become more

442
00:17:45,110 --> 00:17:42,600
aware and their senses are more exposed

443
00:17:46,970 --> 00:17:45,120
and this is very tricky balance and I

444
00:17:50,029 --> 00:17:46,980
guess that comes with experience or

445
00:17:52,250 --> 00:17:50,039
reaching this chemical high in your body

446
00:17:54,230 --> 00:17:52,260
because it dissolves chemical reaction

447
00:17:57,169 --> 00:17:54,240
that starts to

448
00:17:59,090 --> 00:17:57,179
throw you around in a way and then you

449
00:18:01,130 --> 00:17:59,100
have to navigate in that space in your

450
00:18:02,870 --> 00:18:01,140
kind of physical reaction and mental

451
00:18:05,390 --> 00:18:02,880
space so how do you coordinate the two

452
00:18:07,850 --> 00:18:05,400
so that's why I was doing it is to

453
00:18:10,250 --> 00:18:07,860
appreciate what does it take for a

454
00:18:13,789 --> 00:18:10,260
person to go through all of that and yet

455
00:18:16,610 --> 00:18:13,799
to orient and then bypass that

456
00:18:20,150 --> 00:18:16,620
and there is an important threshold is

457
00:18:23,150 --> 00:18:20,160
when you bypass this fear yeah into

458
00:18:25,310 --> 00:18:23,160
performance where you're able to expand

459
00:18:27,110 --> 00:18:25,320
your awareness because you've got this

460
00:18:30,590 --> 00:18:27,120
adrenaline because you've got all this

461
00:18:33,529 --> 00:18:30,600
chemical cocktail happening it's how do

462
00:18:37,909 --> 00:18:33,539
you Orient in that space and become

463
00:18:41,090 --> 00:18:37,919

better at utilizing those resources of

464
00:18:44,690 --> 00:18:41,100
sharpened senses and you see that the

465
00:18:46,430 --> 00:18:44,700
experienced skydivers become very honed

466
00:18:47,990 --> 00:18:46,440
in but there is a point where you can

467
00:18:49,490 --> 00:18:48,000
become

468
00:18:51,289 --> 00:18:49,500
complacent

469
00:18:52,789 --> 00:18:51,299
and that's when Eris happens when you

470
00:18:54,950 --> 00:18:52,799
become too confident

471
00:18:58,070 --> 00:18:54,960
and that's also an important factor so

472
00:18:59,270 --> 00:18:58,080
in people who are high performance uh we

473
00:19:01,549 --> 00:18:59,280
are washing in the hood of high

474
00:19:03,350 --> 00:19:01,559
performance environment is important for

475
00:19:05,690 --> 00:19:03,360
them not to become too sure of

476
00:19:08,390 --> 00:19:05,700
themselves or to coincident that they

477
00:19:12,110 --> 00:19:08,400
know everything and it's a really hard

478
00:19:14,930 --> 00:19:12,120
Edge you know to keep is to say that I'm

479
00:19:18,169 --> 00:19:14,940
you know I know everything versus

480
00:19:20,150 --> 00:19:18,179
uh I am you know so basic basically

481
00:19:22,549 --> 00:19:20,160
again they narrow their Vision instead

482
00:19:25,010 --> 00:19:22,559
of widening and suddenly

483
00:19:27,350 --> 00:19:25,020
it catches them

484
00:19:29,210 --> 00:19:27,360
as I was going through your work I came

485
00:19:30,770 --> 00:19:29,220
across a term that I haven't seen before

486
00:19:32,029 --> 00:19:30,780
that seems very relevant to a lot of

487
00:19:34,370 --> 00:19:32,039
what you're talking about which is

488
00:19:36,169 --> 00:19:34,380

cognitive engineering would you mind

489
00:19:38,090 --> 00:19:36,179
explaining for the listeners what

490
00:19:40,130 --> 00:19:38,100
cognitive engineering is and how it

491
00:19:43,610 --> 00:19:40,140
applies to your work

492
00:19:45,470 --> 00:19:43,620
sure cognitive engineering is it's

493
00:19:48,710 --> 00:19:45,480
working with how we process information

494
00:19:50,630 --> 00:19:48,720
and how we then present it on visual

495
00:19:53,690 --> 00:19:50,640
display or through any type of

496
00:19:55,789 --> 00:19:53,700
information that we allow people to read

497
00:19:57,770 --> 00:19:55,799
or to understand or to hear so any

498
00:20:00,650 --> 00:19:57,780
senses that you have

499
00:20:03,110 --> 00:20:00,660
so it's merging the fields of design of

500
00:20:04,970 --> 00:20:03,120
equipment or design of procedures or

501
00:20:07,789 --> 00:20:04,980
design of the environment

502
00:20:09,890 --> 00:20:07,799
for most Optimum performance through

503
00:20:12,950 --> 00:20:09,900
representation of queues

504
00:20:15,710 --> 00:20:12,960
and that's the merge of psychology and

505
00:20:17,750 --> 00:20:15,720
engineering and people in this domain

506
00:20:19,630 --> 00:20:17,760
come from both from psychology and

507
00:20:22,190 --> 00:20:19,640
engineering and both perspectives

508
00:20:24,289 --> 00:20:22,200
contribute tremendously because

509
00:20:26,029 --> 00:20:24,299
obviously an engineer is working from

510
00:20:29,570 --> 00:20:26,039
perspective how things work and they're

511
00:20:32,390 --> 00:20:29,580
able to explicate that quite clearly

512
00:20:35,210 --> 00:20:32,400
through procedures or training or design

513
00:20:37,730 --> 00:20:35,220

of environmental equipment and I would

514
00:20:40,310 --> 00:20:37,740
come from a point of understanding kind

515
00:20:44,690 --> 00:20:40,320
of how the corks turn in our mind and

516
00:20:46,909 --> 00:20:44,700
what would that be helpful to

517
00:20:49,789 --> 00:20:46,919
absorb that information given our

518
00:20:52,430 --> 00:20:49,799
limitations of perception or memory or

519
00:20:54,650 --> 00:20:52,440
reaction or decision making or

520
00:20:57,230 --> 00:20:54,660
situational awareness overall

521
00:20:59,690 --> 00:20:57,240
so this is how the cognitive engineering

522
00:21:02,750 --> 00:20:59,700
term comes together

523
00:21:05,330 --> 00:21:02,760
so looking back at your work with

524
00:21:07,190 --> 00:21:05,340
improving the shame and blame culture in

525
00:21:10,370 --> 00:21:07,200
the aviation industry and the work that

526
00:21:12,350 --> 00:21:10,380
you've done there when we look to the

527
00:21:14,650 --> 00:21:12,360
efforts that are being made now to

528
00:21:18,590 --> 00:21:14,660
improve the reporting culture around

529
00:21:20,450 --> 00:21:18,600
UFOs and other aerial phenomena what

530
00:21:22,430 --> 00:21:20,460
would be your recommendation to people

531
00:21:25,370 --> 00:21:22,440
doing that work how can we better

532
00:21:27,770 --> 00:21:25,380
improve reporting and decrease the shame

533
00:21:31,370 --> 00:21:27,780
and blame that goes along with reporting

534
00:21:34,370 --> 00:21:31,380
of anomalous craft and experiences so

535
00:21:38,029 --> 00:21:34,380
UAP and UFO

536
00:21:40,669 --> 00:21:38,039
the main is a taboo in a way

537
00:21:44,149 --> 00:21:40,679
and it has been and I was surprised to

538
00:21:47,149 --> 00:21:44,159

come to this field because I grew up

539
00:21:49,310 --> 00:21:47,159
with the perspective that unusual things

540
00:21:53,810 --> 00:21:49,320
happen and we observe them

541
00:21:55,610 --> 00:21:53,820
and it was not a topic that was a taboo

542
00:21:58,549 --> 00:21:55,620
where I was growing up

543
00:22:00,529 --> 00:21:58,559
so when I came to space psychology I

544
00:22:01,730 --> 00:22:00,539
found that you're not allowed to talk

545
00:22:04,610 --> 00:22:01,740
about it

546
00:22:08,270 --> 00:22:04,620
and that is okay

547
00:22:12,169 --> 00:22:08,280
if that's what people feel like but I

548
00:22:13,730 --> 00:22:12,179
feel you cannot ignore it and first I

549
00:22:16,970 --> 00:22:13,740
can't that

550
00:22:18,710 --> 00:22:16,980
realization is when I was studying my

551
00:22:21,350 --> 00:22:18,720
PhD

552
00:22:24,049 --> 00:22:21,360
and there were errors happening

553
00:22:27,169 --> 00:22:24,059
and there were even cartoons drawings

554
00:22:29,090 --> 00:22:27,179
going about Pilots

555
00:22:30,529 --> 00:22:29,100
thinking that there's a ghost in the

556
00:22:32,570 --> 00:22:30,539
machine

557
00:22:34,370 --> 00:22:32,580
can you say a little bit more about the

558
00:22:35,990 --> 00:22:34,380
ghost in the cockpit what what were they

559
00:22:38,529 --> 00:22:36,000
referring to

560
00:22:41,750 --> 00:22:38,539
the ghost in the cockpit is referred to

561
00:22:44,510 --> 00:22:41,760
a new type of equipment that came into

562
00:22:46,430 --> 00:22:44,520
the cockpit which was Automation and

563
00:22:49,010 --> 00:22:46,440

then there was the introduction of

564
00:22:51,169 --> 00:22:49,020
autopilot and the autopilot would have

565
00:22:53,510 --> 00:22:51,179
different functions so for example they

566
00:22:55,730 --> 00:22:53,520
could control a speed or it could

567
00:22:58,430 --> 00:22:55,740
control the attitude such as does it

568
00:23:00,710 --> 00:22:58,440
have a nose down or nose up and it could

569
00:23:03,230 --> 00:23:00,720
also have a navigation pilot so

570
00:23:04,490 --> 00:23:03,240
autopilot that will navigate from point

571
00:23:07,970 --> 00:23:04,500
to point

572
00:23:10,370 --> 00:23:07,980
and all of these functions it's not just

573
00:23:14,450 --> 00:23:10,380
so an autopilot could be in any one of

574
00:23:15,950 --> 00:23:14,460
those modes it's called so it's a task a

575
00:23:20,029 --> 00:23:15,960
mode is a task

576
00:23:22,010 --> 00:23:20,039
and those modes were different for every

577
00:23:24,169 --> 00:23:22,020
manufacturer so from Airbus there would

578
00:23:25,490 --> 00:23:24,179
be different types of modes for Lockheed

579
00:23:28,789 --> 00:23:25,500
Martin there would be another types of

580
00:23:31,789 --> 00:23:28,799
modes and but more so

581
00:23:35,210 --> 00:23:31,799
between the types of within my one

582
00:23:38,270 --> 00:23:35,220
manufacturer for example a300 and A320

583
00:23:41,029 --> 00:23:38,280
which is Airbus aircraft they would have

584
00:23:43,310 --> 00:23:41,039
different philosophy on how

585
00:23:46,370 --> 00:23:43,320
that autopilot would engage and whether

586
00:23:49,250 --> 00:23:46,380
it will control the speed of for example

587
00:23:52,490 --> 00:23:49,260
climbing or descending or will it

588
00:23:54,770 --> 00:23:52,500

control their nose attitude so this is

589
00:23:56,690 --> 00:23:54,780
two different things so if it controls

590
00:23:58,250 --> 00:23:56,700
the nose then the speed is not

591
00:24:00,230 --> 00:23:58,260
controlled that it would if it's

592
00:24:02,990 --> 00:24:00,240
climbing it will decrease speed quite

593
00:24:04,490 --> 00:24:03,000
quickly or if it snows down then it will

594
00:24:07,130 --> 00:24:04,500
increase the speed

595
00:24:09,289 --> 00:24:07,140
and that's a problem so if the pilot is

596
00:24:13,070 --> 00:24:09,299
considering that it's the autopilot is

597
00:24:14,990 --> 00:24:13,080
controlling the the ascent yeah then the

598
00:24:16,430 --> 00:24:15,000
climb then the problem is that if

599
00:24:18,470 --> 00:24:16,440
they're not watching the speed the

600
00:24:21,710 --> 00:24:18,480
aircraft will stall so it will decrease

601
00:24:23,029 --> 00:24:21,720
and unable to hold itself up in the air

602
00:24:25,310 --> 00:24:23,039
and that's where the problems were

603
00:24:27,169 --> 00:24:25,320
happening so if there's enough altitude

604
00:24:28,970 --> 00:24:27,179
so enough height the aircraft would be

605
00:24:31,610 --> 00:24:28,980
able to recover but if there isn't

606
00:24:33,529 --> 00:24:31,620
that's why accident happened because the

607
00:24:35,630 --> 00:24:33,539
pilot would assume that there would be

608
00:24:37,909 --> 00:24:35,640
something that they would have done but

609
00:24:39,710 --> 00:24:37,919
the aircraft was not doing that and

610
00:24:41,450 --> 00:24:39,720
that's where it was considered the ghost

611
00:24:44,149 --> 00:24:41,460
in the cockpit because there was a

612
00:24:46,370 --> 00:24:44,159
philosophy that was not clear to the

613
00:24:48,289 --> 00:24:46,380

pilot which was an engineer's

614
00:24:50,990 --> 00:24:48,299
perspective of how the aircraft should

615
00:24:53,570 --> 00:24:51,000
fly but the pilot has a different logic

616
00:24:54,770 --> 00:24:53,580
it's sort of like if you can imagine if

617
00:24:57,770 --> 00:24:54,780
a child

618
00:25:00,110 --> 00:24:57,780
sits in the car and they would have a

619
00:25:02,149 --> 00:25:00,120
picture on how it works and then there

620
00:25:03,649 --> 00:25:02,159
is some experienced driver who sits in

621
00:25:05,990 --> 00:25:03,659
the car and they would have a different

622
00:25:08,210 --> 00:25:06,000
perspective on how it works and yet

623
00:25:09,710 --> 00:25:08,220
there will be an engineer or a Formula

624
00:25:11,630 --> 00:25:09,720
One driver who would drive the car

625
00:25:13,730 --> 00:25:11,640
completely differently because they

626
00:25:16,490 --> 00:25:13,740
would know the traction and how it

627
00:25:18,770 --> 00:25:16,500
slides and when to break and if it's wet

628
00:25:20,270 --> 00:25:18,780
and so on so that all of them will have

629
00:25:21,950 --> 00:25:20,280
a different perspective and hence they

630
00:25:24,289 --> 00:25:21,960
would have a different information slow

631
00:25:26,930 --> 00:25:24,299
and the need and this is exactly what

632
00:25:28,850 --> 00:25:26,940
was happening with the design of the

633
00:25:31,549 --> 00:25:28,860
cockpit they were not considering

634
00:25:34,130 --> 00:25:31,559
Pilot's view it was engineer thinking

635
00:25:36,590 --> 00:25:34,140
how they've designed the aircraft and

636
00:25:39,169 --> 00:25:36,600
hence what the pallet would need it and

637
00:25:41,390 --> 00:25:39,179
that disconnect between what the pilot

638
00:25:44,269 --> 00:25:41,400

thought it was doing versus an engineer

639
00:25:48,490 --> 00:25:44,279
what they thought the pilot needs

640
00:25:51,950 --> 00:25:48,500
so so convoluted but those two Logics

641
00:25:54,769 --> 00:25:51,960
which seemed obvious to either to both

642
00:25:57,649 --> 00:25:54,779
of them to both parties did not connect

643
00:26:00,230 --> 00:25:57,659
in the cockpit when it was operated and

644
00:26:02,570 --> 00:26:00,240
hence it was considered to be a ghost in

645
00:26:06,590 --> 00:26:02,580
the machine and it was also a taboo

646
00:26:08,990 --> 00:26:06,600
topic and that kind of resonated with me

647
00:26:11,510 --> 00:26:09,000
in respect to

648
00:26:14,870 --> 00:26:11,520
how could you not talk about something

649
00:26:16,970 --> 00:26:14,880
that bothers you if it's has to do with

650
00:26:19,850 --> 00:26:16,980
safety of another person

651
00:26:22,310 --> 00:26:19,860
especially that I was already

652
00:26:24,490 --> 00:26:22,320
working with the mentality for example

653
00:26:27,049 --> 00:26:24,500
in skydiving and also Learning to Fly

654
00:26:29,210 --> 00:26:27,059
that you cannot

655
00:26:31,430 --> 00:26:29,220
leave a thought out if you've got a

656
00:26:33,649 --> 00:26:31,440
doubt even if it's just a stomach

657
00:26:36,049 --> 00:26:33,659
feeling in your stomach or

658
00:26:38,269 --> 00:26:36,059
you for some reason get chills

659
00:26:40,610 --> 00:26:38,279
you cannot ignore that because it's to

660
00:26:42,890 --> 00:26:40,620
do with safety so there may be somewhere

661
00:26:45,470 --> 00:26:42,900
a clue and it's always good to voice

662
00:26:48,230 --> 00:26:45,480
that because if you don't you'll regret

663
00:26:51,950 --> 00:26:48,240

it you really regret it because it will

664
00:26:54,529 --> 00:26:51,960
affect either you or your colleagues and

665
00:26:56,630 --> 00:26:54,539
sometimes sort of looking into cognitive

666
00:26:58,610 --> 00:26:56,640
processing and information flow

667
00:27:00,470 --> 00:26:58,620
sometimes you notice something but

668
00:27:02,029 --> 00:27:00,480
you're not aware of it so for example

669
00:27:03,169 --> 00:27:02,039
you could be looking but you're not

670
00:27:05,990 --> 00:27:03,179
seeing

671
00:27:07,010 --> 00:27:06,000
and this is exactly the same so I

672
00:27:11,390 --> 00:27:07,020
thought

673
00:27:14,269 --> 00:27:11,400
if these Pilots are not reporting errors

674
00:27:17,149 --> 00:27:14,279
and it was surprising to me but then

675
00:27:19,549 --> 00:27:17,159
speaking with commercial pilots in my

676
00:27:22,850 --> 00:27:19,559
work I realized that

677
00:27:24,890 --> 00:27:22,860
there's an expectation or a culture that

678
00:27:26,630 --> 00:27:24,900
a pilot especially a captain especially

679
00:27:28,970 --> 00:27:26,640
a training Captain which is yet another

680
00:27:32,090 --> 00:27:28,980
level they must

681
00:27:33,409 --> 00:27:32,100
know everything it's an expectation that

682
00:27:35,090 --> 00:27:33,419
if they don't know they're not good

683
00:27:37,850 --> 00:27:35,100
enough

684
00:27:40,730 --> 00:27:37,860
and then I would say these are you know

685
00:27:42,950 --> 00:27:40,740
brave men but majority were men at the

686
00:27:45,409 --> 00:27:42,960
time I haven't met a female pilot

687
00:27:46,490 --> 00:27:45,419
commercial pilot or military pilot at

688
00:27:49,730 --> 00:27:46,500

the time

689
00:27:52,430 --> 00:27:49,740
these gentlemen were

690
00:27:55,250 --> 00:27:52,440
seriously considering and they were

691
00:27:58,430 --> 00:27:55,260
talking among themselves for safety

692
00:28:01,190 --> 00:27:58,440
purposes but they were unable to

693
00:28:02,810 --> 00:28:01,200
officially report these problems of not

694
00:28:03,830 --> 00:28:02,820
understanding what was happening in the

695
00:28:06,830 --> 00:28:03,840
cockpit

696
00:28:08,870 --> 00:28:06,840
because there was a fear of losing a job

697
00:28:11,390 --> 00:28:08,880
being suspended and of course then it's

698
00:28:12,470 --> 00:28:11,400
your life you know it's your income it's

699
00:28:14,690 --> 00:28:12,480
your family

700
00:28:17,149 --> 00:28:14,700
it's um you know everything breaks down

701
00:28:19,130 --> 00:28:17,159
from there especially if he the person

702
00:28:22,310 --> 00:28:19,140
is the soul

703
00:28:23,810 --> 00:28:22,320
provider for the family it's an um it's

704
00:28:27,169 --> 00:28:23,820
a massive impact

705
00:28:29,810 --> 00:28:27,179
and the war instances where people were

706
00:28:32,930 --> 00:28:29,820
taken off their jobs suspended and they

707
00:28:34,430 --> 00:28:32,940
didn't receive money basically and they

708
00:28:37,370 --> 00:28:34,440
committed suicide

709
00:28:39,710 --> 00:28:37,380
and Pilots are very

710
00:28:41,149 --> 00:28:39,720
stressful profession as a dish that is

711
00:28:43,370 --> 00:28:41,159
it is they're far away from family

712
00:28:45,890 --> 00:28:43,380
they're traveling a lot they're not

713
00:28:48,289 --> 00:28:45,900

connected to their social support system

714
00:28:51,350 --> 00:28:48,299
when you're leaving in one for example

715
00:28:53,990 --> 00:28:51,360
location and your job is nine to five

716
00:28:56,269 --> 00:28:54,000
and then you're with family you're

717
00:28:57,950 --> 00:28:56,279
constantly on the mall you're constantly

718
00:28:59,330 --> 00:28:57,960
changing time zones so there's a lot of

719
00:29:02,750 --> 00:28:59,340
pressures

720
00:29:05,690 --> 00:29:02,760
and then so that was kind of a key for

721
00:29:09,169 --> 00:29:05,700
me sort of a wake-up moment to listen to

722
00:29:11,269 --> 00:29:09,179
what these Pilots do with a problem

723
00:29:13,730 --> 00:29:11,279
which is very serious like if you're

724
00:29:14,870 --> 00:29:13,740
flying a plane and the first rule that

725
00:29:19,669 --> 00:29:14,880
you must

726
00:29:21,350 --> 00:29:19,679
plane if you are not ahead of the plane

727
00:29:22,789 --> 00:29:21,360
meaning that you don't know what it's

728
00:29:25,669 --> 00:29:22,799
going to do in the next the second

729
00:29:27,950 --> 00:29:25,679
minute 10 minutes an hour as far as you

730
00:29:30,289 --> 00:29:27,960
can predict then you're behind the plane

731
00:29:33,590 --> 00:29:30,299
and that's bad that means that you are

732
00:29:34,970 --> 00:29:33,600
unable to predict and consider options

733
00:29:37,549 --> 00:29:34,980
for

734
00:29:38,990 --> 00:29:37,559
where you're gonna land how you're going

735
00:29:42,370 --> 00:29:39,000
to consider

736
00:29:45,409 --> 00:29:42,380
the wins the potential for changing

737
00:29:47,269 --> 00:29:45,419
conditional fuel you will or you have to

738
00:29:49,610 --> 00:29:47,279

be almost constantly on the Move knowing

739
00:29:51,350 --> 00:29:49,620
where you will be in the next available

740
00:29:52,730 --> 00:29:51,360
time and the further you can predict the

741
00:29:56,690 --> 00:29:52,740
better

742
00:29:57,710 --> 00:29:56,700
so if the pilot is even for a Split

743
00:30:00,710 --> 00:29:57,720
Second

744
00:30:02,510 --> 00:30:00,720
is not in the state of flow and

745
00:30:05,029 --> 00:30:02,520
understanding what's happening then

746
00:30:08,029 --> 00:30:05,039
they're distracted and the whole crew

747
00:30:10,310 --> 00:30:08,039
the whole people in the cabin behind you

748
00:30:12,769 --> 00:30:10,320
if it's passengers people on the ground

749
00:30:14,930 --> 00:30:12,779
Air Traffic Control other things

750
00:30:17,990 --> 00:30:14,940
in the air is all

751
00:30:19,610 --> 00:30:18,000
it's a mess it's a picture that is not

752
00:30:22,430 --> 00:30:19,620
in the Pilot's minds and they're unable

753
00:30:25,730 --> 00:30:22,440
to perform their job efficiently

754
00:30:28,669 --> 00:30:25,740
so then I saw that there was like a

755
00:30:31,789 --> 00:30:28,679
Spurs of groups forming and they started

756
00:30:33,049 --> 00:30:31,799
so the internet was not that advanced in

757
00:30:35,990 --> 00:30:33,059
terms of sharing but there were email

758
00:30:38,210 --> 00:30:36,000
lists and they were local groups and

759
00:30:40,730 --> 00:30:38,220
there were ruler noise society which I

760
00:30:42,950 --> 00:30:40,740
was a member for and they were in

761
00:30:44,450 --> 00:30:42,960
Australia and of course in the UK and

762
00:30:46,490 --> 00:30:44,460
other countries

763
00:30:48,590 --> 00:30:46,500

and they started bringing up these

764
00:30:51,010 --> 00:30:48,600
issues and saying that we must do

765
00:30:54,830 --> 00:30:51,020
something about this we must speak up

766
00:30:56,930 --> 00:30:54,840
and there shouldn't be a blame culture

767
00:30:58,850 --> 00:30:56,940
if you don't know there must be a

768
00:31:01,010 --> 00:30:58,860
legitimate reason and if you ask another

769
00:31:03,649 --> 00:31:01,020
Captain you know that you feel safe to

770
00:31:05,690 --> 00:31:03,659
us and they also don't know that's a

771
00:31:08,029 --> 00:31:05,700
problem that's a big problem one thing

772
00:31:09,769 --> 00:31:08,039
is one person doesn't know but if your

773
00:31:10,610 --> 00:31:09,779
colleagues of the same level don't know

774
00:31:13,310 --> 00:31:10,620
then

775
00:31:14,930 --> 00:31:13,320
this is a problem in the system it's not

776
00:31:15,830 --> 00:31:14,940
a problem with that knowledge of that

777
00:31:17,690 --> 00:31:15,840
person

778
00:31:20,510 --> 00:31:17,700
and that's when

779
00:31:23,450 --> 00:31:20,520
it's that there was a beginning of

780
00:31:27,049 --> 00:31:23,460
uprise I would say to say that we must

781
00:31:29,769 --> 00:31:27,059
report any problem any error otherwise

782
00:31:31,970 --> 00:31:29,779
it's your life on the line it's everyone

783
00:31:33,649 --> 00:31:31,980
you know that you're flying with it's

784
00:31:36,169 --> 00:31:33,659
the company's line

785
00:31:38,090 --> 00:31:36,179
and so once these brave people started

786
00:31:40,370 --> 00:31:38,100
to bring up this problems it started to

787
00:31:42,950 --> 00:31:40,380
be frame and there was a beginning of

788
00:31:44,810 --> 00:31:42,960

NTSB so National Transportation safety

789
00:31:45,889 --> 00:31:44,820
board in the U.S and equivalent in

790
00:31:49,070 --> 00:31:45,899
Australia

791
00:31:51,590 --> 00:31:49,080
started to form databases where they

792
00:31:52,730 --> 00:31:51,600
started to put the lines

793
00:31:57,529 --> 00:31:52,740
or

794
00:32:01,130 --> 00:31:57,539
phrase that would say

795
00:32:03,649 --> 00:32:01,140
the speed mode in Airbus 320

796
00:32:05,930 --> 00:32:03,659
was not clear during this particular

797
00:32:08,510 --> 00:32:05,940
phase and there would be like literally

798
00:32:11,630 --> 00:32:08,520
from NTSB reports there will be phrases

799
00:32:13,909 --> 00:32:11,640
that will be dropped into a specifically

800
00:32:17,149 --> 00:32:13,919
safety human factors investigation

801
00:32:18,590 --> 00:32:17,159
catalog and that's what I was sieving

802
00:32:20,930 --> 00:32:18,600
through

803
00:32:23,990 --> 00:32:20,940
to understand what the problem was so

804
00:32:26,690 --> 00:32:24,000
without that there was no science can be

805
00:32:29,090 --> 00:32:26,700
done no research could be done right but

806
00:32:34,430 --> 00:32:29,100
in order for that to appear people lost

807
00:32:38,690 --> 00:32:34,440
jobs right they uh they lost their pride

808
00:32:40,310 --> 00:32:38,700
for example they lost ability to speak

809
00:32:43,669 --> 00:32:40,320
truthfully about their professional

810
00:32:46,669 --> 00:32:43,679
opinion you know because they must be

811
00:32:49,310 --> 00:32:46,679
able to be good observers right and good

812
00:32:52,190 --> 00:32:49,320
experts in what they you know if they're

813
00:32:55,370 --> 00:32:52,200

training Captain how could they not be

814
00:32:58,430 --> 00:32:55,380
qualified to report an error even if it

815
00:33:01,730 --> 00:32:58,440
seems an odd one yeah did you find a

816
00:33:05,750 --> 00:33:01,740
difference in the community so you have

817
00:33:08,630 --> 00:33:05,760
pilot communities who are reticent to

818
00:33:12,169 --> 00:33:08,640
report anomalies especially aerial

819
00:33:14,269 --> 00:33:12,179
anomalies and you worked for basically

820
00:33:16,310 --> 00:33:14,279
your whole career to help change that

821
00:33:18,590 --> 00:33:16,320
culture of reporting although it's not

822
00:33:21,350 --> 00:33:18,600
perfect now it's a lot better and that

823
00:33:23,630 --> 00:33:21,360
directly impacts safety as well as the

824
00:33:26,090 --> 00:33:23,640
well-being of Pilots I wonder if you can

825
00:33:28,009 --> 00:33:26,100
say something about what you find in UAP

826
00:33:29,930 --> 00:33:28,019
culture with respect to astronauts

827
00:33:33,169 --> 00:33:29,940
because I know that you have you're

828
00:33:35,509 --> 00:33:33,179
engaged in identifying those astronauts

829
00:33:37,430 --> 00:33:35,519
who are gonna do well in these extreme

830
00:33:39,350 --> 00:33:37,440
environments the extreme environment of

831
00:33:41,149 --> 00:33:39,360
space for example

832
00:33:43,509 --> 00:33:41,159
thank you Diana I think that's very

833
00:33:46,310 --> 00:33:43,519
pertinent you know the difference on how

834
00:33:47,990 --> 00:33:46,320
the two different communities uh

835
00:33:49,730 --> 00:33:48,000
approached and what they trained and

836
00:33:52,789 --> 00:33:49,740
what they're allowed and not allowed to

837
00:33:56,210 --> 00:33:52,799
do also loud and not allowed to say

838
00:34:00,049 --> 00:33:56,220

because there is Association of what

839
00:34:02,990 --> 00:34:00,059
would be the consequences so in a way

840
00:34:04,850 --> 00:34:03,000
with the astronauts in the work that I

841
00:34:08,510 --> 00:34:04,860
do and I guess it's maybe worth

842
00:34:11,710 --> 00:34:08,520
retreating that my current work is in

843
00:34:15,829 --> 00:34:11,720
designing tools and equipment to help

844
00:34:18,290 --> 00:34:15,839
astronauts to reform at the optimum but

845
00:34:20,210 --> 00:34:18,300
also to support their well-being so when

846
00:34:22,550 --> 00:34:20,220
I was working at the European astronaut

847
00:34:25,129 --> 00:34:22,560
Center there was no training for

848
00:34:29,089 --> 00:34:25,139
reporting anomalous phenomena

849
00:34:30,829 --> 00:34:29,099
related to UFO or UAP this was a topic

850
00:34:32,030 --> 00:34:30,839
that was not talked about so I didn't

851
00:34:34,849 --> 00:34:32,040
either

852
00:34:38,149 --> 00:34:34,859
and as far as I'm aware this is still

853
00:34:42,109 --> 00:34:38,159
the case and when I do listen to

854
00:34:43,609 --> 00:34:42,119
interviews of astronauts and they asked

855
00:34:45,649 --> 00:34:43,619
that question because it is on the

856
00:34:48,169 --> 00:34:45,659
Public's mind and so the public would

857
00:34:51,409 --> 00:34:48,179
generally ask that question they seemed

858
00:34:54,589 --> 00:34:51,419
to have the same way to answer it

859
00:34:56,149 --> 00:34:54,599
because I think they're told on how to

860
00:34:58,670 --> 00:34:56,159
answer that question

861
00:35:01,190 --> 00:34:58,680
and when you are sort of in a

862
00:35:04,310 --> 00:35:01,200
close-kneet discussion there may be some

863
00:35:05,570 --> 00:35:04,320

disclosure of how they feel about it but

864
00:35:09,230 --> 00:35:05,580
there isn't

865
00:35:11,750 --> 00:35:09,240
open culture of discussing it and the

866
00:35:14,510 --> 00:35:11,760
astronauts that I have seen talk about

867
00:35:16,609 --> 00:35:14,520
it they are retired so I haven't spoken

868
00:35:18,890 --> 00:35:16,619
with them personally but it is in the

869
00:35:19,790 --> 00:35:18,900
public domain those who have spoken

870
00:35:23,690 --> 00:35:19,800
about

871
00:35:27,470 --> 00:35:23,700
observing unusual when I in the air or

872
00:35:29,750 --> 00:35:27,480
in space and they're mostly

873
00:35:32,390 --> 00:35:29,760
report this once they have no

874
00:35:35,630 --> 00:35:32,400
consequential or made responsibility or

875
00:35:37,190 --> 00:35:35,640
documents they sign so obviously they

876
00:35:40,490 --> 00:35:37,200
take their job seriously in terms of

877
00:35:42,410 --> 00:35:40,500
security and what the policy is

878
00:35:45,349 --> 00:35:42,420
and you can't

879
00:35:47,810 --> 00:35:45,359
I think force people to talk about it

880
00:35:50,150 --> 00:35:47,820
even if they do want to because it's

881
00:35:51,650 --> 00:35:50,160
their livelihood just the same as we

882
00:35:54,349 --> 00:35:51,660
talked before

883
00:35:56,510 --> 00:35:54,359
does that answer the question Diana it

884
00:35:59,390 --> 00:35:56,520
does can you talk a little bit about

885
00:36:02,750 --> 00:35:59,400
your I know that you just have started

886
00:36:06,050 --> 00:36:02,760
to work with the UAP human factors task

887
00:36:07,910 --> 00:36:06,060
force can you talk about how that is and

888
00:36:10,130 --> 00:36:07,920

what you see could be

889
00:36:12,170 --> 00:36:10,140
your contribution

890
00:36:16,849 --> 00:36:12,180
so this is a group

891
00:36:19,069 --> 00:36:16,859
that I am contributing as an expert but

892
00:36:20,210 --> 00:36:19,079
of course I do not represent the views

893
00:36:22,910 --> 00:36:20,220
of the group

894
00:36:25,730 --> 00:36:22,920
and we're brought together on the basis

895
00:36:29,030 --> 00:36:25,740
that we have something to contribute and

896
00:36:32,030 --> 00:36:29,040
it's a collective effort in the same way

897
00:36:35,089 --> 00:36:32,040
as accident investigation this is again

898
00:36:37,490 --> 00:36:35,099
coming from experience that I had

899
00:36:40,310 --> 00:36:37,500
is that initially everything was human

900
00:36:42,950 --> 00:36:40,320
error right so when aircrafts would

901
00:36:44,270 --> 00:36:42,960
crash it was a pilot error it was

902
00:36:48,109 --> 00:36:44,280
definitely

903
00:36:49,790 --> 00:36:48,119
the person to blame and more so it would

904
00:36:52,430 --> 00:36:49,800
be the captain

905
00:36:56,270 --> 00:36:52,440
because they are in charge of the plane

906
00:36:59,750 --> 00:36:56,280
and even if it was something else it was

907
00:37:02,589 --> 00:36:59,760
often not even investigated in depth and

908
00:37:05,329 --> 00:37:02,599
there was a point when the investigation

909
00:37:07,550 --> 00:37:05,339
it was again a national Transportation

910
00:37:08,990 --> 00:37:07,560
safety board in the US

911
00:37:14,089 --> 00:37:09,000
that

912
00:37:17,930 --> 00:37:14,099
it was 56 percent of all the aircraft

913
00:37:20,810 --> 00:37:17,940

accidents War human error and then there

914
00:37:22,310 --> 00:37:20,820
was two leading researchers they were

915
00:37:24,710 --> 00:37:22,320
Consulting for for a national

916
00:37:26,690 --> 00:37:24,720
Transportation safety board and they

917
00:37:28,370 --> 00:37:26,700
started to look more deeply as a

918
00:37:32,030 --> 00:37:28,380
scientist you know into the data that

919
00:37:34,130 --> 00:37:32,040
was now in the reports and they also did

920
00:37:35,930 --> 00:37:34,140
the interviews because it was part of

921
00:37:38,750 --> 00:37:35,940
increasing safety because the aircrafts

922
00:37:41,630 --> 00:37:38,760
were falling down every week so

923
00:37:45,170 --> 00:37:41,640
commercial flights were crushing that

924
00:37:48,349 --> 00:37:45,180
often so it was time to look at the edit

925
00:37:51,890 --> 00:37:48,359
that it's maybe not the pilots and maybe

926
00:37:54,650 --> 00:37:51,900
the safety needs to be talked about and

927
00:37:57,470 --> 00:37:54,660
that may be this ghost in the machine is

928
00:38:00,829 --> 00:37:57,480
not something to be ignored and people

929
00:38:02,710 --> 00:38:00,839
shouldn't be blamed or fired for that so

930
00:38:05,390 --> 00:38:02,720
at that point there was an investigation

931
00:38:06,589 --> 00:38:05,400
and they brought in experts from

932
00:38:08,510 --> 00:38:06,599
management

933
00:38:11,450 --> 00:38:08,520
from Air Traffic Control from service

934
00:38:13,490 --> 00:38:11,460
from the ground from people who designed

935
00:38:16,670 --> 00:38:13,500
procedures from people who work at the

936
00:38:19,130 --> 00:38:16,680
airport so there was a much bigger

937
00:38:21,530 --> 00:38:19,140
community and there were also external

938
00:38:24,770 --> 00:38:21,540

experts who were independent reviewing

939
00:38:25,730 --> 00:38:24,780
it and until all the facts were pulled

940
00:38:28,430 --> 00:38:25,740
together

941
00:38:30,410 --> 00:38:28,440
and the cockpit of course was the voice

942
00:38:33,770 --> 00:38:30,420
the black box and the cockpit was

943
00:38:35,450 --> 00:38:33,780
analyzed they were able to see that

944
00:38:37,849 --> 00:38:35,460
there were other factors that were

945
00:38:40,790 --> 00:38:37,859
contributing and one good example is

946
00:38:43,550 --> 00:38:40,800
that there was a policy in the company

947
00:38:46,310 --> 00:38:43,560
that they could not make one more

948
00:38:49,069 --> 00:38:46,320
circuit around the airport

949
00:38:51,349 --> 00:38:49,079
because they will waste fuel

950
00:38:55,370 --> 00:38:51,359
and if they waste fuel they were

951
00:38:56,990 --> 00:38:55,380
punished in some way through I don't

952
00:38:59,690 --> 00:38:57,000
know not giving up getting a good flight

953
00:39:03,410 --> 00:38:59,700
or there are many ways that you could

954
00:39:05,930 --> 00:39:03,420
have affect an individual in the company

955
00:39:08,930 --> 00:39:05,940
or they were even celery related

956
00:39:11,810 --> 00:39:08,940
payments related consequences for you

957
00:39:13,849 --> 00:39:11,820
taking an extra circuit because you

958
00:39:15,770 --> 00:39:13,859
thought you needed to check something or

959
00:39:17,450 --> 00:39:15,780
you weren't unsure whether you should

960
00:39:19,069 --> 00:39:17,460
land for example aircraft in this

961
00:39:22,250 --> 00:39:19,079
condition or this weather condition or

962
00:39:25,670 --> 00:39:22,260
something else so as you can imagine is

963
00:39:27,349 --> 00:39:25,680

nothing to do with a consequence of a

964
00:39:29,329 --> 00:39:27,359
pilot error so they've made a decision

965
00:39:30,890 --> 00:39:29,339
because there was a pressure

966
00:39:32,750 --> 00:39:30,900
and otherwise they would have taken

967
00:39:34,130 --> 00:39:32,760
another circuit you know and they would

968
00:39:36,470 --> 00:39:34,140
have double checked and they wouldn't

969
00:39:38,810 --> 00:39:36,480
have pushed down the aircraft and those

970
00:39:40,130 --> 00:39:38,820
for example flying conditions where they

971
00:39:42,770 --> 00:39:40,140
could have changed or they maybe would

972
00:39:44,630 --> 00:39:42,780
have went to another airport because it

973
00:39:47,210 --> 00:39:44,640
was such a close call you know they were

974
00:39:49,130 --> 00:39:47,220
uncomfortable with their skill set to

975
00:39:51,530 --> 00:39:49,140
land under this conditions or in this

976
00:39:54,410 --> 00:39:51,540
state of the aircraft and hence where

977
00:39:56,810 --> 00:39:54,420
does the blame you know where did the

978
00:39:59,990 --> 00:39:56,820
error happened and that's when this

979
00:40:03,170 --> 00:40:00,000
model of Swiss cheese came about

980
00:40:04,849 --> 00:40:03,180
uh in a way where all the holes aligned

981
00:40:07,970 --> 00:40:04,859
together so there was a bad weather

982
00:40:10,790 --> 00:40:07,980
that's one hole then there was a bed for

983
00:40:12,650 --> 00:40:10,800
example visibility placed them too early

984
00:40:15,050 --> 00:40:12,660
in the queue to land or like the

985
00:40:17,990 --> 00:40:15,060
pressure them to land could have had a

986
00:40:20,210 --> 00:40:18,000
better approach or the timing was not

987
00:40:22,190 --> 00:40:20,220
right or you know there could be all

988
00:40:24,890 --> 00:40:22,200

sorts of conditions that contributed to

989
00:40:27,890 --> 00:40:24,900
that and also maybe the pilot was tired

990
00:40:29,990 --> 00:40:27,900
or rushed or they had problems at home

991
00:40:31,609 --> 00:40:30,000
that they were pressured and on top of

992
00:40:34,550 --> 00:40:31,619
that the management said if you don't

993
00:40:36,710 --> 00:40:34,560
let now your celery gets decreased so

994
00:40:38,930 --> 00:40:36,720
they make a decision and they make it

995
00:40:40,849 --> 00:40:38,940
confidently because obviously they're

996
00:40:44,150 --> 00:40:40,859
making it on the basis that okay I can

997
00:40:46,910 --> 00:40:44,160
do this and then it is an error on the

998
00:40:49,670 --> 00:40:46,920
pilot in the end but the pressure came

999
00:40:52,010 --> 00:40:49,680
in way before that moment where they

1000
00:40:53,930 --> 00:40:52,020
made a mistake so then they've

1001
00:40:56,690 --> 00:40:53,940
reattributed the errors in all of those

1002
00:40:59,630 --> 00:40:56,700
accidents and it was less than 30

1003
00:41:01,970 --> 00:40:59,640
percent was the actual pilot error when

1004
00:41:04,790 --> 00:41:01,980
they actually made a mistake so here

1005
00:41:07,069 --> 00:41:04,800
just coming back to the committee or

1006
00:41:08,990 --> 00:41:07,079
looking at to how to assist in the cop

1007
00:41:11,450 --> 00:41:09,000
reporting

1008
00:41:15,349 --> 00:41:11,460
we're in the same way there are experts

1009
00:41:18,109 --> 00:41:15,359
like myself who have a background in or

1010
00:41:19,730 --> 00:41:18,119
accidents looking into how accidents

1011
00:41:22,550 --> 00:41:19,740
were reported and how the Improvement

1012
00:41:24,950 --> 00:41:22,560
was made to attributing where the

1013
00:41:26,390 --> 00:41:24,960

problems were not just in one area but

1014
00:41:29,329 --> 00:41:26,400
there wasn't need to be an improvement

1015
00:41:31,970 --> 00:41:29,339
in several areas as not to have that

1016
00:41:34,370 --> 00:41:31,980
error to happen and that means policy

1017
00:41:35,690 --> 00:41:34,380
changing management changing culture

1018
00:41:38,150 --> 00:41:35,700
changing

1019
00:41:40,550 --> 00:41:38,160
an individual's well-being is important

1020
00:41:43,430 --> 00:41:40,560
so all of those aspects are important to

1021
00:41:46,910 --> 00:41:43,440
consider so hence on this committee

1022
00:41:49,430 --> 00:41:46,920
there are experts from lawyers to people

1023
00:41:52,670 --> 00:41:49,440
who are able to attract funding people

1024
00:41:54,950 --> 00:41:52,680
who are experts Engineers people who are

1025
00:41:58,190 --> 00:41:54,960
experts in terms of good observers

1026
00:42:00,890 --> 00:41:58,200
people have years in designing specific

1027
00:42:03,650 --> 00:42:00,900
systems and understand the behavior and

1028
00:42:07,069 --> 00:42:03,660
so I'm like a small droplet in that

1029
00:42:08,870 --> 00:42:07,079
ocean of expertise and it's important to

1030
00:42:11,270 --> 00:42:08,880
have all of those

1031
00:42:14,329 --> 00:42:11,280
to make a puzzle

1032
00:42:17,210 --> 00:42:14,339
make sense because otherwise we are

1033
00:42:19,430 --> 00:42:17,220
unable to see the picture and the

1034
00:42:21,470 --> 00:42:19,440
analysis needs to come in once all of

1035
00:42:22,370 --> 00:42:21,480
that data points or as many as we can

1036
00:42:24,410 --> 00:42:22,380
gather

1037
00:42:27,650 --> 00:42:24,420
so that's what we are working on at the

1038
00:42:29,510 --> 00:42:27,660

moment is for one is making sure what

1039
00:42:31,670 --> 00:42:29,520
kind of details need to come in into the

1040
00:42:33,890 --> 00:42:31,680
report because they've been a lot of

1041
00:42:35,390 --> 00:42:33,900
Headway already done in the US

1042
00:42:38,030 --> 00:42:35,400
specifically

1043
00:42:40,910 --> 00:42:38,040
on opening up the databases for people

1044
00:42:42,109 --> 00:42:40,920
to start to report that is how do you

1045
00:42:44,810 --> 00:42:42,119
make this

1046
00:42:47,630 --> 00:42:44,820
fluid so that data can be passed on

1047
00:42:51,050 --> 00:42:47,640
early enough because we don't want 20

1048
00:42:52,910 --> 00:42:51,060
year old data if things have the

1049
00:42:55,609 --> 00:42:52,920
frequency of this phenomena has

1050
00:42:57,950 --> 00:42:55,619
increased in the recent years especially

1051
00:43:00,109 --> 00:42:57,960
so you know what has changed why has it

1052
00:43:02,569 --> 00:43:00,119
changed so all of those aspects are

1053
00:43:05,150 --> 00:43:02,579
important to consider and

1054
00:43:08,270 --> 00:43:05,160
That's my kind of contribution is seeing

1055
00:43:11,450 --> 00:43:08,280
what I can do based on my experience

1056
00:43:13,250 --> 00:43:11,460
amazing well I'd love to shift gears a

1057
00:43:15,349 --> 00:43:13,260
little bit and talk about some of the

1058
00:43:17,930 --> 00:43:15,359
work that you do specifically with

1059
00:43:20,390 --> 00:43:17,940
astronauts so we've discussed a few

1060
00:43:22,190 --> 00:43:20,400
times on the podcast and Diana has

1061
00:43:24,770 --> 00:43:22,200
discussed in American Cosmic her book

1062
00:43:26,210 --> 00:43:24,780
The overview effect that people can

1063
00:43:28,490 --> 00:43:26,220

experience while looking back at the

1064
00:43:29,990 --> 00:43:28,500
Earth from space What insights do you

1065
00:43:32,510 --> 00:43:30,000
think we can draw from the shift in

1066
00:43:35,750 --> 00:43:32,520
Consciousness that people report

1067
00:43:40,430 --> 00:43:35,760
so the overview effect exists for a

1068
00:43:42,710 --> 00:43:40,440
while as a concept and I feel that I'm

1069
00:43:45,790 --> 00:43:42,720
better to speak in slightly different

1070
00:43:49,130 --> 00:43:45,800
direction I would say it's a helpful

1071
00:43:51,829 --> 00:43:49,140
concept to consider as a metaphor

1072
00:43:54,910 --> 00:43:51,839
of gaining A New Perspective

1073
00:43:57,890 --> 00:43:54,920
because an overview effect is when

1074
00:43:59,809 --> 00:43:57,900
astronauts or space tourists gain a

1075
00:44:02,089 --> 00:43:59,819
perspective of the earth as kind of as a

1076
00:44:04,690 --> 00:44:02,099
jewel and they are seeing it how small

1077
00:44:07,910 --> 00:44:04,700
and precious we are in this massive

1078
00:44:10,910 --> 00:44:07,920
space Blackness of it at the back

1079
00:44:14,089 --> 00:44:10,920
behind the Earth and also the famous

1080
00:44:17,510 --> 00:44:14,099
photograph that was taken from the Moon

1081
00:44:20,569 --> 00:44:17,520
and that the Earth rise that is giving

1082
00:44:23,809 --> 00:44:20,579
individual and understanding on

1083
00:44:26,690 --> 00:44:23,819
how precious we are and how we are all

1084
00:44:29,690 --> 00:44:26,700
in the same boat or a spaceship and I

1085
00:44:31,970 --> 00:44:29,700
think it is important to have that an

1086
00:44:35,150 --> 00:44:31,980
understanding that there is needs to be

1087
00:44:38,390 --> 00:44:35,160
for a Global Perspective and going into

1088
00:44:39,829 --> 00:44:38,400

space is not the only way to gain that

1089
00:44:43,490 --> 00:44:39,839
perspective

1090
00:44:46,190 --> 00:44:43,500
and I think to consider that we are all

1091
00:44:50,569 --> 00:44:46,200
one organism

1092
00:44:52,309 --> 00:44:50,579
and if you and you can look at that from

1093
00:44:54,829 --> 00:44:52,319
many

1094
00:44:56,150 --> 00:44:54,839
fields of work so you can look at the

1095
00:44:58,250 --> 00:44:56,160
engineering for example and understand

1096
00:45:00,770 --> 00:44:58,260
yourself that you're one small Cog in a

1097
00:45:05,210 --> 00:45:00,780
big wheel you can look at it from

1098
00:45:07,309 --> 00:45:05,220
biology and see the Earth as a tiny cell

1099
00:45:09,710 --> 00:45:07,319
that has a lot of elements and we're all

1100
00:45:11,750 --> 00:45:09,720
affecting each other and once there is a

1101
00:45:15,410 --> 00:45:11,760
little bit of chemical balance out of

1102
00:45:18,589 --> 00:45:15,420
work the whole cell is unable to perform

1103
00:45:21,710 --> 00:45:18,599
and it's destroyed and I think it's

1104
00:45:23,569 --> 00:45:21,720
depending on what that individual is

1105
00:45:25,970 --> 00:45:23,579
able to conceptualize

1106
00:45:27,730 --> 00:45:25,980
so somebody needs to go out and see the

1107
00:45:30,290 --> 00:45:27,740
Earth if they can afford it from space

1108
00:45:31,970 --> 00:45:30,300
but equally you can communicate this

1109
00:45:35,210 --> 00:45:31,980
through other means

1110
00:45:36,230 --> 00:45:35,220
and understanding that we are a single

1111
00:45:39,109 --> 00:45:36,240
culture

1112
00:45:42,109 --> 00:45:39,119
is important and I think we're getting

1113
00:45:46,550 --> 00:45:42,119

closer to that from time to time and

1114
00:45:48,470 --> 00:45:46,560
then as a human kind of nation we lose

1115
00:45:51,490 --> 00:45:48,480
it for a bit and then there is another

1116
00:45:55,010 --> 00:45:51,500
Surge and I think we will have that

1117
00:45:58,309 --> 00:45:55,020
spiral change in perception as we

1118
00:46:01,069 --> 00:45:58,319
continue and hopefully will get closer

1119
00:46:04,790 --> 00:46:01,079
to understand that we are a single

1120
00:46:08,390 --> 00:46:04,800
species that we're all connected and the

1121
00:46:10,970 --> 00:46:08,400
air we breathe is produced by trees that

1122
00:46:13,430 --> 00:46:10,980
we're cutting it's the simplest way if

1123
00:46:15,650 --> 00:46:13,440
an astronaut is in space and you cut

1124
00:46:18,230 --> 00:46:15,660
their oxygen flow

1125
00:46:20,750 --> 00:46:18,240
there's very little time there's

1126
00:46:22,910 --> 00:46:20,760
no time and we had those incidences

1127
00:46:25,490 --> 00:46:22,920
including skydiving

1128
00:46:27,950 --> 00:46:25,500
well skydiving is sort of when you

1129
00:46:29,270 --> 00:46:27,960
suddenly hit with this airflow and

1130
00:46:31,130 --> 00:46:29,280
you're unable to take a breath in

1131
00:46:32,150 --> 00:46:31,140
because it's just shocking but the point

1132
00:46:33,710 --> 00:46:32,160
is that

1133
00:46:36,770 --> 00:46:33,720
I think once we understand that there is

1134
00:46:38,870 --> 00:46:36,780
no more oxygen flow and if we can

1135
00:46:40,250 --> 00:46:38,880
conceptualize this is equally good to

1136
00:46:43,309 --> 00:46:40,260
change perspective

1137
00:46:46,010 --> 00:46:43,319
so this realization that the Earth is

1138
00:46:47,829 --> 00:46:46,020

kind of its own single organism

1139
00:46:50,690 --> 00:46:47,839
how has that

1140
00:46:53,210 --> 00:46:50,700
realization impacted your work

1141
00:46:55,790 --> 00:46:53,220
especially with regards to

1142
00:46:57,470 --> 00:46:55,800
the Earth language that you're working

1143
00:46:59,690 --> 00:46:57,480
on developing

1144
00:47:02,390 --> 00:46:59,700
that's very helpful actually to frame it

1145
00:47:06,050 --> 00:47:02,400
in the way that we are all

1146
00:47:08,390 --> 00:47:06,060
on one Earth on one spaceship or on one

1147
00:47:12,109 --> 00:47:08,400
single cell organism

1148
00:47:14,690 --> 00:47:12,119
and what I find that is vital

1149
00:47:16,870 --> 00:47:14,700
because I've also worked on projects on

1150
00:47:19,130 --> 00:47:16,880
how couches speaking the same language

1151
00:47:21,349 --> 00:47:19,140
miscommunicate and completely

1152
00:47:24,589 --> 00:47:21,359
misunderstand each other

1153
00:47:26,150 --> 00:47:24,599
and this is kind of ironic right that we

1154
00:47:28,849 --> 00:47:26,160
presume that we understand what the

1155
00:47:31,309 --> 00:47:28,859
other person is saying and yet then when

1156
00:47:34,430 --> 00:47:31,319
they execute what we agreed on is

1157
00:47:36,650 --> 00:47:34,440
completely different to what I assume

1158
00:47:39,470 --> 00:47:36,660
that we'll be doing although we use the

1159
00:47:41,750 --> 00:47:39,480
same language and the same kind of words

1160
00:47:44,270 --> 00:47:41,760
but the concept behind the word is very

1161
00:47:46,609 --> 00:47:44,280
different but equally when we meet

1162
00:47:51,829 --> 00:47:46,619
somebody who is not speaking our own

1163
00:47:53,089 --> 00:47:51,839

language we are much more careful so in

1164
00:47:56,089 --> 00:47:53,099
that particular project which was

1165
00:48:00,349 --> 00:47:56,099
interesting that Nations that were

1166
00:48:02,510 --> 00:48:00,359
speaking English right they that was not

1167
00:48:04,490 --> 00:48:02,520
their first language they were actually

1168
00:48:06,250 --> 00:48:04,500
much better in understanding each other

1169
00:48:08,270 --> 00:48:06,260
and they had less

1170
00:48:10,609 --> 00:48:08,280
miscommunications about what they're

1171
00:48:13,370 --> 00:48:10,619
going to do or how they are going to go

1172
00:48:15,470 --> 00:48:13,380
ahead and that really was interesting

1173
00:48:17,870 --> 00:48:15,480
that on the one end when you're speaking

1174
00:48:20,210 --> 00:48:17,880
the same language there is an instant

1175
00:48:22,130 --> 00:48:20,220
connection so for example if I meet

1176
00:48:24,530 --> 00:48:22,140
someone who was born in the same place

1177
00:48:26,450 --> 00:48:24,540
where I was so I find out often people

1178
00:48:29,329 --> 00:48:26,460
ask you where are you from

1179
00:48:31,190 --> 00:48:29,339
and sometimes it's the question that

1180
00:48:33,829 --> 00:48:31,200
kind of you know you don't want to

1181
00:48:35,450 --> 00:48:33,839
answer depending on where you are what

1182
00:48:37,430 --> 00:48:35,460
you're doing or you're just tired of it

1183
00:48:39,050 --> 00:48:37,440
if you are living in a foreign to You

1184
00:48:40,670 --> 00:48:39,060
country and because of your accent

1185
00:48:41,930 --> 00:48:40,680
people constantly ask you this question

1186
00:48:43,190 --> 00:48:41,940
I'm just thinking you know I've been

1187
00:48:46,010 --> 00:48:43,200
here before

1188
00:48:47,390 --> 00:48:46,020

and yet then you meet somebody who

1189
00:48:49,730 --> 00:48:47,400
doesn't need to ask that question and

1190
00:48:51,829 --> 00:48:49,740
say oh my god do you remember that or

1191
00:48:53,930 --> 00:48:51,839
have you been there well this is amazing

1192
00:48:55,609 --> 00:48:53,940
how about that food or how about that

1193
00:48:59,030 --> 00:48:55,619
smell or do you remember that and

1194
00:49:01,430 --> 00:48:59,040
suddenly your total strangers and yet

1195
00:49:04,490 --> 00:49:01,440
you're totally connected just because of

1196
00:49:07,069 --> 00:49:04,500
your origin or because of your

1197
00:49:08,829 --> 00:49:07,079
language that you're speaking so there

1198
00:49:13,390 --> 00:49:08,839
is many barriers of broken

1199
00:49:16,670 --> 00:49:13,400
instantaneously if you have the same

1200
00:49:18,710 --> 00:49:16,680
Concepts so although we shouldn't take

1201
00:49:20,690 --> 00:49:18,720
it for granted the language that we

1202
00:49:23,270 --> 00:49:20,700
could misunderstand the concept but

1203
00:49:25,490 --> 00:49:23,280
equally it allows us to connect in such

1204
00:49:28,250 --> 00:49:25,500
a way that a lot of barriers in

1205
00:49:29,630 --> 00:49:28,260
communication and interactions

1206
00:49:32,750 --> 00:49:29,640
taken away

1207
00:49:36,050 --> 00:49:32,760
and if I meet someone from my own

1208
00:49:37,609 --> 00:49:36,060
culture my own Hometown or even studying

1209
00:49:40,250 --> 00:49:37,619
the same degree for example right

1210
00:49:43,309 --> 00:49:40,260
cognitive engineer where suddenly

1211
00:49:45,349 --> 00:49:43,319
halfway into conversational reading we

1212
00:49:47,150 --> 00:49:45,359
don't need to make a lot of back talk

1213
00:49:48,710 --> 00:49:47,160

because we have a lot of Concepts

1214
00:49:53,030 --> 00:49:48,720
similar to each other

1215
00:49:55,309 --> 00:49:53,040
so my thought that came about regarding

1216
00:49:57,770 --> 00:49:55,319
Earth's language is to think what can be

1217
00:50:00,589 --> 00:49:57,780
what can connect us at the core and

1218
00:50:02,930 --> 00:50:00,599
completely change our connections where

1219
00:50:03,770 --> 00:50:02,940
we don't approach with hostility to each

1220
00:50:07,010 --> 00:50:03,780
other

1221
00:50:09,589 --> 00:50:07,020
or rather not hostility but caution and

1222
00:50:11,990 --> 00:50:09,599
fear that something would happen because

1223
00:50:13,970 --> 00:50:12,000
we are taught as children you know

1224
00:50:16,730 --> 00:50:13,980
strange Danger

1225
00:50:18,770 --> 00:50:16,740
and it's so ingrained for the right

1226
00:50:20,809 --> 00:50:18,780
reasons right because we're protecting

1227
00:50:24,050 --> 00:50:20,819
children because the world is not as

1228
00:50:26,210 --> 00:50:24,060
safe as we would like to be but then you

1229
00:50:28,250 --> 00:50:26,220
are constantly on guard and to make that

1230
00:50:31,730 --> 00:50:28,260
connection is very difficult

1231
00:50:35,030 --> 00:50:31,740
but if we could create this acceptance

1232
00:50:37,430 --> 00:50:35,040
and connectedness to not just the

1233
00:50:39,470 --> 00:50:37,440
language the human you know human spoken

1234
00:50:41,329 --> 00:50:39,480
language but if we could make a

1235
00:50:44,990 --> 00:50:41,339
connection to the language as we are

1236
00:50:48,890 --> 00:50:45,000
speaking to our surrounding and hear our

1237
00:50:50,870 --> 00:50:48,900
surrounding because very frequently if I

1238
00:50:54,349 --> 00:50:50,880

am in the city

1239
00:50:57,170 --> 00:50:54,359
I actually can't hear the Earth at all

1240
00:50:58,970 --> 00:50:57,180
and I could be sitting in my house and

1241
00:51:00,349 --> 00:50:58,980
if the windows are not open I can't hear

1242
00:51:03,710 --> 00:51:00,359
the birds

1243
00:51:05,690 --> 00:51:03,720
and I feel as if I have blinkers on and

1244
00:51:08,750 --> 00:51:05,700
I'm suddenly immersed and forgetting

1245
00:51:10,910 --> 00:51:08,760
that for example that I am very much

1246
00:51:12,710 --> 00:51:10,920
alone but as soon as I open the window I

1247
00:51:14,390 --> 00:51:12,720
hear the birds and understand okay am I

1248
00:51:15,950 --> 00:51:14,400
actually much bigger and much more

1249
00:51:18,470 --> 00:51:15,960
connected and much more supported than

1250
00:51:20,569 --> 00:51:18,480
if I just go out and get some fresh air

1251
00:51:22,730 --> 00:51:20,579
new information would flow in because I

1252
00:51:25,549 --> 00:51:22,740
would feel much more refreshed

1253
00:51:27,109 --> 00:51:25,559
and the same thing with the children if

1254
00:51:29,630 --> 00:51:27,119
we could make them more connected to

1255
00:51:32,390 --> 00:51:29,640
Nature then I was hoping that through

1256
00:51:35,390 --> 00:51:32,400
that connection we would be able to give

1257
00:51:38,030 --> 00:51:35,400
them an opportunity to be more connected

1258
00:51:39,349 --> 00:51:38,040
to each other because if there is a

1259
00:51:41,569 --> 00:51:39,359
common language

1260
00:51:42,950 --> 00:51:41,579
or hearing nature and understanding

1261
00:51:45,530 --> 00:51:42,960
nature

1262
00:51:47,510 --> 00:51:45,540
then everywhere they are on earth as

1263
00:51:49,849 --> 00:51:47,520

soon as they hear anything you know in

1264
00:51:52,370 --> 00:51:49,859
insect a frog or a bird

1265
00:51:54,530 --> 00:51:52,380
which is a kind of a constant resonance

1266
00:51:56,630 --> 00:51:54,540
that it's always in the background I

1267
00:52:00,230 --> 00:51:56,640
mean unless you are in a very cold

1268
00:52:03,890 --> 00:52:00,240
country there is always this overtone or

1269
00:52:05,390 --> 00:52:03,900
undertone or background of creatures and

1270
00:52:07,970 --> 00:52:05,400
if you can

1271
00:52:10,549 --> 00:52:07,980
be connected into that field and

1272
00:52:13,370 --> 00:52:10,559
literally vibrate with that field

1273
00:52:15,770 --> 00:52:13,380
I feel no matter where you'd go you'd be

1274
00:52:18,589 --> 00:52:15,780
able to connect with that

1275
00:52:20,210 --> 00:52:18,599
that's a beautiful idea it also seems

1276
00:52:22,130 --> 00:52:20,220
like it would be very daunting to try to

1277
00:52:23,690 --> 00:52:22,140
figure out how to create

1278
00:52:25,849 --> 00:52:23,700
something like that that's sort of a

1279
00:52:27,710 --> 00:52:25,859
language so how have you even begun to

1280
00:52:31,490 --> 00:52:27,720
tackle this problem how do you think

1281
00:52:33,309 --> 00:52:31,500
about it when my children were born

1282
00:52:35,930 --> 00:52:33,319
I was very

1283
00:52:37,549 --> 00:52:35,940
interested to tell them about where

1284
00:52:40,549 --> 00:52:37,559
they've just arrived to because they

1285
00:52:41,990 --> 00:52:40,559
literally land and so women who support

1286
00:52:44,510 --> 00:52:42,000
birth at home

1287
00:52:48,230 --> 00:52:44,520
their other sort of name of their

1288
00:52:51,410 --> 00:52:48,240

profession is Doula they say they meet

1289
00:52:55,069 --> 00:52:51,420
the baby earth side so sort of like when

1290
00:52:57,950 --> 00:52:55,079
it lands on in our dimension

1291
00:53:00,349 --> 00:52:57,960
and it is literally a landing on a

1292
00:53:01,970 --> 00:53:00,359
completely different plane on a

1293
00:53:05,390 --> 00:53:01,980
spaceship earth

1294
00:53:07,609 --> 00:53:05,400
and we need to introduce them and we do

1295
00:53:08,990 --> 00:53:07,619
this in many many different cultures to

1296
00:53:12,530 --> 00:53:09,000
this in different way

1297
00:53:15,829 --> 00:53:12,540
and in our Western culture

1298
00:53:19,670 --> 00:53:15,839
there is a lot of ways which is right or

1299
00:53:21,589 --> 00:53:19,680
wrong right but it does not trusted to a

1300
00:53:23,930 --> 00:53:21,599
mother's intuition which is quite

1301
00:53:26,329 --> 00:53:23,940
interesting I think that we are coming

1302
00:53:29,210 --> 00:53:26,339
back to it so it's a big movement to

1303
00:53:31,250 --> 00:53:29,220
trust a woman herself of what is the

1304
00:53:34,549 --> 00:53:31,260
right thing for their baby instead of

1305
00:53:36,290 --> 00:53:34,559
being pushed with what should be done or

1306
00:53:38,210 --> 00:53:36,300
when the baby should be fed

1307
00:53:39,910 --> 00:53:38,220
and I was bombarded with all of that

1308
00:53:42,349 --> 00:53:39,920
because I'm very

1309
00:53:44,510 --> 00:53:42,359
intellectual if you wish and I trust the

1310
00:53:48,349 --> 00:53:44,520
science and I was trained in science but

1311
00:53:51,349 --> 00:53:48,359
equally I had this inner knowing that

1312
00:53:53,510 --> 00:53:51,359
I want to introduce my baby not to wait

1313
00:53:55,370 --> 00:53:53,520

until they're 11 or

1314
00:53:56,270 --> 00:53:55,380
you know until they're 15 to tell them

1315
00:53:59,210 --> 00:53:56,280
about

1316
00:54:00,770 --> 00:53:59,220
how I see this world and I want to show

1317
00:54:02,930 --> 00:54:00,780
that in some way

1318
00:54:05,030 --> 00:54:02,940
and so I thought how can I communicate

1319
00:54:06,950 --> 00:54:05,040
what is the way to settle anything to my

1320
00:54:09,650 --> 00:54:06,960
baby apart from hugging and changing

1321
00:54:12,589 --> 00:54:09,660
them and feeding them and cuddling them

1322
00:54:15,650 --> 00:54:12,599
you know attempting to sing to them and

1323
00:54:17,030 --> 00:54:15,660
so I started to look on black and white

1324
00:54:18,710 --> 00:54:17,040
books because I thought there's

1325
00:54:21,230 --> 00:54:18,720
information there and there's something

1326
00:54:23,089 --> 00:54:21,240
that I could communicate through the

1327
00:54:26,030 --> 00:54:23,099
pictures and because I am a cognitive

1328
00:54:27,770 --> 00:54:26,040
engineer I know that pictures can tell a

1329
00:54:30,589 --> 00:54:27,780
lot you know we can change people's

1330
00:54:32,089 --> 00:54:30,599
cognition and perception and decision

1331
00:54:34,309 --> 00:54:32,099
making and awareness

1332
00:54:36,049 --> 00:54:34,319
and I started to look and I found the

1333
00:54:38,630 --> 00:54:36,059
best book you know the best book I could

1334
00:54:41,450 --> 00:54:38,640
possibly afford is about that Amazon

1335
00:54:44,030 --> 00:54:41,460
reviews were really high and I bought

1336
00:54:45,589 --> 00:54:44,040
the book and I looked at the book and I

1337
00:54:48,410 --> 00:54:45,599
was crying you know you get very

1338
00:54:50,450 --> 00:54:48,420

emotional when you just keep birthing

1339
00:54:52,609 --> 00:54:50,460
your still breastfeeding and I was

1340
00:54:55,250 --> 00:54:52,619
trying to figure out why is this that

1341
00:54:58,609 --> 00:54:55,260
we've built um large hydrogen collider

1342
00:55:02,630 --> 00:54:58,619
we have robots that look like humans and

1343
00:55:05,030 --> 00:55:02,640
that we have been to the moon and and so

1344
00:55:07,730 --> 00:55:05,040
all these Grand projects and yet we're

1345
00:55:09,049 --> 00:55:07,740
showing to the baby who has an absolute

1346
00:55:12,770 --> 00:55:09,059
capacity

1347
00:55:15,589 --> 00:55:12,780
of making billion Connections in such a

1348
00:55:17,569 --> 00:55:15,599
short space of time in their brain being

1349
00:55:21,109 --> 00:55:17,579
networked it's like a foundation being

1350
00:55:23,690 --> 00:55:21,119
built and we're not using that the only

1351
00:55:25,490 --> 00:55:23,700
thing that we the babies are lucky that

1352
00:55:28,069 --> 00:55:25,500
we are talking with them and they would

1353
00:55:29,630 --> 00:55:28,079
be ever so lucky if they live in a busy

1354
00:55:30,890 --> 00:55:29,640
household because they will hear more

1355
00:55:33,470 --> 00:55:30,900
conversations

1356
00:55:36,290 --> 00:55:33,480
and yet that even that is kind of lost

1357
00:55:38,870 --> 00:55:36,300
and so at best or hear a radio and a

1358
00:55:40,910 --> 00:55:38,880
YouTube and a TV program and they

1359
00:55:42,049 --> 00:55:40,920
wouldn't hear maybe even a grandmother

1360
00:55:45,349 --> 00:55:42,059
tongue

1361
00:55:48,170 --> 00:55:45,359
which is often an intonation that is

1362
00:55:50,809 --> 00:55:48,180
filled with frequencies of love and

1363
00:55:54,770 --> 00:55:50,819

connection and empathy

1364
00:55:56,990 --> 00:55:54,780
and so I looked on thinking why are we

1365
00:55:59,510 --> 00:55:57,000
showing to the baby a shadow of a mouse

1366
00:56:02,089 --> 00:55:59,520
that doesn't even look like a mouse or

1367
00:56:03,950 --> 00:56:02,099
why are we showing a butterfly not in

1368
00:56:07,250 --> 00:56:03,960
the right shape

1369
00:56:08,450 --> 00:56:07,260
and why are we choosing these images and

1370
00:56:10,970 --> 00:56:08,460
nothing else

1371
00:56:12,290 --> 00:56:10,980
and of course these are artists and

1372
00:56:14,690 --> 00:56:12,300
these are Publishers and they know

1373
00:56:16,790 --> 00:56:14,700
what's selling and this is a notion

1374
00:56:18,170 --> 00:56:16,800
that's been there for a while but I

1375
00:56:21,290 --> 00:56:18,180
thought I'm not showing this to my baby

1376
00:56:23,569 --> 00:56:21,300
because this is not true I don't want my

1377
00:56:25,490 --> 00:56:23,579
baby's brain to be wired to think that

1378
00:56:28,730 --> 00:56:25,500
that's how the world is looking

1379
00:56:31,130 --> 00:56:28,740
and I thought look I designed cockpit I

1380
00:56:34,010 --> 00:56:31,140
designed information space why can't I

1381
00:56:36,049 --> 00:56:34,020
design a cockpit or an information space

1382
00:56:37,970 --> 00:56:36,059
for the baby about what I want to

1383
00:56:41,089 --> 00:56:37,980
communicate what I want to show I want

1384
00:56:44,630 --> 00:56:41,099
to show how beautiful it is how unusual

1385
00:56:46,849 --> 00:56:44,640
and how rich this environment is and who

1386
00:56:49,250 --> 00:56:46,859
is to say that the baby can't perceive

1387
00:56:51,349 --> 00:56:49,260
it you know and then I started reading

1388
00:56:54,349 --> 00:56:51,359

into what we know scientifically about

1389
00:56:56,569 --> 00:56:54,359
what babies know or what able they can

1390
00:56:59,270 --> 00:56:56,579
perceive physiologically

1391
00:57:02,690 --> 00:56:59,280
and we do know a lot about what baby can

1392
00:57:05,569 --> 00:57:02,700
perceive and I then started to form and

1393
00:57:08,690 --> 00:57:05,579
designed principles as just as I would

1394
00:57:10,549 --> 00:57:08,700
for a cockpit or aircraft display or

1395
00:57:13,730 --> 00:57:10,559
space type of equipment to understand

1396
00:57:16,549 --> 00:57:13,740
what we can absorb what the physiology

1397
00:57:19,130 --> 00:57:16,559
can take and what our cognitive

1398
00:57:21,170 --> 00:57:19,140
processing is able to take in

1399
00:57:22,370 --> 00:57:21,180
and then based on that you design a

1400
00:57:25,730 --> 00:57:22,380
principle and then look for information

1401
00:57:27,650 --> 00:57:25,740
to match that how do you represent that

1402
00:57:29,450 --> 00:57:27,660
to match those parameters or

1403
00:57:32,990 --> 00:57:29,460
requirements if you wish

1404
00:57:35,390 --> 00:57:33,000
and things started to emerge and they

1405
00:57:37,250 --> 00:57:35,400
were so easy to find Once those designs

1406
00:57:39,890 --> 00:57:37,260
principles were available

1407
00:57:41,930 --> 00:57:39,900
and they started popping and I just

1408
00:57:45,650 --> 00:57:41,940
started to draw them and I started

1409
00:57:46,730 --> 00:57:45,660
showing to my baby what I thought they

1410
00:57:48,950 --> 00:57:46,740
might like

1411
00:57:51,470 --> 00:57:48,960
and they would just stare at it and they

1412
00:57:53,930 --> 00:57:51,480
would just not take their eyes away and

1413
00:57:55,910 --> 00:57:53,940

I was amazed who were to say that babies

1414
00:57:57,710 --> 00:57:55,920
have no concentration

1415
00:58:00,829 --> 00:57:57,720
they had an extraordinary concentration

1416
00:58:02,690 --> 00:58:00,839
and they wanted more you know so my

1417
00:58:04,790 --> 00:58:02,700
friends were asking what is it that

1418
00:58:06,589 --> 00:58:04,800
you're showing to your baby is it is it

1419
00:58:08,870 --> 00:58:06,599
okay for them to see it and I said well

1420
00:58:10,670 --> 00:58:08,880
look they're happy they're not crying in

1421
00:58:12,650 --> 00:58:10,680
fact they stop crying if I start showing

1422
00:58:15,470 --> 00:58:12,660
it to them so if I need an extra minute

1423
00:58:17,930 --> 00:58:15,480
to change them or to wash them or to get

1424
00:58:19,790 --> 00:58:17,940
some food ready or to get myself ready

1425
00:58:22,670 --> 00:58:19,800
or to get myself a whole cup of tea

1426
00:58:24,589 --> 00:58:22,680
while I sit down to breastfeed them and

1427
00:58:26,809 --> 00:58:24,599
I could give them something useful that

1428
00:58:29,150 --> 00:58:26,819
they could study why not

1429
00:58:31,970 --> 00:58:29,160
so that's what I did and then someone

1430
00:58:33,770 --> 00:58:31,980
said why don't you publish this and so I

1431
00:58:36,349 --> 00:58:33,780
thought okay I'll publish this

1432
00:58:38,569 --> 00:58:36,359
and then when I started to publish this

1433
00:58:40,069 --> 00:58:38,579
instead giving like a sample a template

1434
00:58:42,049 --> 00:58:40,079
to what it would be if people start

1435
00:58:43,730 --> 00:58:42,059
asking so about what is this why are you

1436
00:58:45,710 --> 00:58:43,740
showing this why are you thinking people

1437
00:58:47,690 --> 00:58:45,720
want to buy it and so then I had to

1438
00:58:48,710 --> 00:58:47,700

write a description of what these images

1439
00:58:57,530 --> 00:58:48,720
were

1440
00:58:59,510 --> 00:58:57,540
because suddenly they could

1441
00:59:01,670 --> 00:58:59,520
show and share with the baby something

1442
00:59:03,410 --> 00:59:01,680
very intellectual so a father could just

1443
00:59:05,569 --> 00:59:03,420
show the book and say well I've read

1444
00:59:06,890 --> 00:59:05,579
with the book today with why one month's

1445
00:59:09,530 --> 00:59:06,900
old baby

1446
00:59:13,309 --> 00:59:09,540
and they could share it with other young

1447
00:59:15,289 --> 00:59:13,319
fathers or new fathers and say not only

1448
00:59:18,170 --> 00:59:15,299
that they've done that but actually they

1449
00:59:22,010 --> 00:59:18,180
would share facts about what they were

1450
00:59:25,670 --> 00:59:22,020
looking and the idea was is to take

1451
00:59:28,870 --> 00:59:25,680
every profession that I could connect to

1452
00:59:32,270 --> 00:59:28,880
and transcribe that into visual images

1453
00:59:34,190 --> 00:59:32,280
that a parent can then share what they

1454
00:59:36,410 --> 00:59:34,200
are passionate about about their field

1455
00:59:37,309 --> 00:59:36,420
of work or what they're fascinated their

1456
00:59:40,789 --> 00:59:37,319
Hobby

1457
00:59:44,089 --> 00:59:40,799
to the baby at this age and what happens

1458
00:59:46,010 --> 00:59:44,099
is that the father or even a mother who

1459
00:59:49,010 --> 00:59:46,020
doesn't know how to interact with the

1460
00:59:49,970 --> 00:59:49,020
baby Beyond those things nurturing

1461
00:59:52,789 --> 00:59:49,980
things

1462
00:59:54,890 --> 00:59:52,799
then suddenly they feel that they're

1463
00:59:57,170 --> 00:59:54,900

transported into a different world the

1464
00:59:59,510 --> 00:59:57,180
mother relaxed the father relaxed the

1465
01:00:02,150 --> 00:59:59,520
uncle is able to take the baby off the

1466
01:00:04,670 --> 01:00:02,160
mother give the mother a break and they

1467
01:00:06,950 --> 01:00:04,680
are both sharing this other world of

1468
01:00:09,049 --> 01:00:06,960
Earthly World about what Earth is like

1469
01:00:12,109 --> 01:00:09,059
and they're both learning and they're

1470
01:00:14,390 --> 01:00:12,119
both fascinated and both are uplifted

1471
01:00:16,730 --> 01:00:14,400
after experience because otherwise the

1472
01:00:19,130 --> 01:00:16,740
uncle or grandparent or a new father

1473
01:00:22,130 --> 01:00:19,140
doesn't know what to do with the baby

1474
01:00:24,710 --> 01:00:22,140
and here they're both coming out on the

1475
01:00:26,510 --> 01:00:24,720
other part of this journey fulfilled

1476
01:00:29,030 --> 01:00:26,520
because the baby was happy the father

1477
01:00:31,010 --> 01:00:29,040
was happy and more so they get to tell

1478
01:00:32,690 --> 01:00:31,020
the stories about it like a friend who

1479
01:00:34,490 --> 01:00:32,700
doesn't have children that they held the

1480
01:00:36,049 --> 01:00:34,500
baby for half an hour and the baby

1481
01:00:38,210 --> 01:00:36,059
didn't cry

1482
01:00:40,970 --> 01:00:38,220
and and the mother got a break or a

1483
01:00:43,910 --> 01:00:40,980
father got a break and it's kind of I

1484
01:00:46,069 --> 01:00:43,920
think it's amazing what we don't know

1485
01:00:48,049 --> 01:00:46,079
and what we should find out and more

1486
01:00:51,049 --> 01:00:48,059
things we can uncover

1487
01:00:53,329 --> 01:00:51,059
can you describe for listeners who might

1488
01:00:55,130 --> 01:00:53,339

be having trouble picturing this what

1489
01:00:57,890 --> 01:00:55,140
does this book look like can you

1490
01:00:59,630 --> 01:00:57,900
describe what you're showing the baby

1491
01:01:01,789 --> 01:00:59,640
so the images are in black and white

1492
01:01:05,930 --> 01:01:01,799
because when we're born we don't have

1493
01:01:08,569 --> 01:01:05,940
the physiology to see colors it's just

1494
01:01:10,670 --> 01:01:08,579
those color cones are not developed

1495
01:01:12,770 --> 01:01:10,680
but we're able to perceive contrast so

1496
01:01:15,049 --> 01:01:12,780
we'll perceive the colors but we don't

1497
01:01:17,750 --> 01:01:15,059
see them sort of in this fullness but we

1498
01:01:20,510 --> 01:01:17,760
just see them as Grays and blacks and

1499
01:01:23,270 --> 01:01:20,520
whites that's it's shaded

1500
01:01:26,750 --> 01:01:23,280
and the rest is based on what the baby

1501
01:01:28,010 --> 01:01:26,760
is attracted to so for example I would

1502
01:01:30,589 --> 01:01:28,020
take a picture of large hydrogen

1503
01:01:34,370 --> 01:01:30,599
collider and just much

1504
01:01:36,289 --> 01:01:34,380
the intensity and frequency so the

1505
01:01:39,829 --> 01:01:36,299
thickness of the lines is what the baby

1506
01:01:42,349 --> 01:01:39,839
can see because we know how thin they

1507
01:01:44,329 --> 01:01:42,359
the line they can perceive and in fact

1508
01:01:45,230 --> 01:01:44,339
the point that the babies have blurred

1509
01:01:48,589 --> 01:01:45,240
vision

1510
01:01:52,130 --> 01:01:48,599
is not quite correct because the baby

1511
01:01:54,170 --> 01:01:52,140
can actually see your eyelashes how they

1512
01:01:56,150 --> 01:01:54,180
are separated you stay at the right

1513
01:01:57,890 --> 01:01:56,160

distance and the right distances are you

1514
01:01:59,990 --> 01:01:57,900
holding the baby breastfeeding or just

1515
01:02:02,390 --> 01:02:00,000
cuddling them to sleep it's that

1516
01:02:04,309 --> 01:02:02,400
distance that they need to be looking

1517
01:02:06,069 --> 01:02:04,319
into your eyes so you look into theirs

1518
01:02:08,390 --> 01:02:06,079
so it's about them making a connection

1519
01:02:11,329 --> 01:02:08,400
and that's the distance that they're

1520
01:02:14,750 --> 01:02:11,339
able to see very clearly

1521
01:02:17,210 --> 01:02:14,760
so the book is with large images the

1522
01:02:21,049 --> 01:02:17,220
size of our face because that's what

1523
01:02:24,109 --> 01:02:21,059
they're born intuitively to see and then

1524
01:02:25,970 --> 01:02:24,119
it's matching how thick and thin the

1525
01:02:28,130 --> 01:02:25,980
lines should be so they're able to see

1526
01:02:29,329 --> 01:02:28,140
so just looked for those type of

1527
01:02:30,829 --> 01:02:29,339
pictures and

1528
01:02:33,170 --> 01:02:30,839
change them

1529
01:02:36,230 --> 01:02:33,180
to the pattern that they're able to

1530
01:02:39,890 --> 01:02:36,240
perceive and so it is Meaningful so that

1531
01:02:42,170 --> 01:02:39,900
when they grow they're able to recognize

1532
01:02:45,049 --> 01:02:42,180
that in the world and what's interesting

1533
01:02:48,170 --> 01:02:45,059
that things that we're attracted to or

1534
01:02:51,410 --> 01:02:48,180
the babies are attracted to is what we

1535
01:02:55,010 --> 01:02:51,420
consider as adults beautiful

1536
01:02:56,150 --> 01:02:55,020
and these uh principles of golden

1537
01:02:58,609 --> 01:02:56,160
section

1538
01:03:00,289 --> 01:02:58,619

so it's where the nature is showing us

1539
01:03:05,210 --> 01:03:00,299
how to

1540
01:03:07,670 --> 01:03:05,220
successful designs of what we're

1541
01:03:10,309 --> 01:03:07,680
attracted to matches the golden section

1542
01:03:13,430 --> 01:03:10,319
proportions or there's an element of

1543
01:03:17,930 --> 01:03:13,440
flashy sequence so all of those elements

1544
01:03:19,309 --> 01:03:17,940
that are embedded in nature and a lot of

1545
01:03:21,710 --> 01:03:19,319
scientists have noticed this for

1546
01:03:23,870 --> 01:03:21,720
hundreds of years for thousands if you

1547
01:03:26,450 --> 01:03:23,880
go into ancient cultures that they would

1548
01:03:27,650 --> 01:03:26,460
show this actually to babies just in a

1549
01:03:30,109 --> 01:03:27,660
different way

1550
01:03:32,630 --> 01:03:30,119
so this is what the books are about is

1551
01:03:34,670 --> 01:03:32,640
transporting the baby to the world and

1552
01:03:36,890 --> 01:03:34,680
bringing them a microscope

1553
01:03:38,450 --> 01:03:36,900
type of perception so they could see

1554
01:03:41,390 --> 01:03:38,460
that the distance that they're able to

1555
01:03:43,910 --> 01:03:41,400
see and the intensity of color and

1556
01:03:46,789 --> 01:03:43,920
granularity that they're able to

1557
01:03:50,270 --> 01:03:46,799
perceive so it's just a conversion

1558
01:03:52,069 --> 01:03:50,280
of those things I want to show them or

1559
01:03:54,650 --> 01:03:52,079
any parent want to show them

1560
01:03:56,930 --> 01:03:54,660
it's like translating into their own

1561
01:03:59,390 --> 01:03:56,940
visual perception

1562
01:04:02,329 --> 01:03:59,400
so for babies who are being exposed to

1563
01:04:05,390 --> 01:04:02,339

these kinds of images in this kind of

1564
01:04:08,510 --> 01:04:05,400
communication how do you expect that to

1565
01:04:10,730 --> 01:04:08,520
change the way that they communicate and

1566
01:04:13,010 --> 01:04:10,740
view the world moving forward how do you

1567
01:04:15,349 --> 01:04:13,020
see this developing in the long term so

1568
01:04:19,010 --> 01:04:15,359
there's another part to this images

1569
01:04:21,370 --> 01:04:19,020
there is a sound as well so I've done

1570
01:04:25,609 --> 01:04:21,380
kind of small experiments it's making

1571
01:04:30,770 --> 01:04:25,619
small steps as I'm progressing and what

1572
01:04:33,230 --> 01:04:30,780
I saw that the sound that is surrounding

1573
01:04:36,230 --> 01:04:33,240
us has also patents

1574
01:04:37,970 --> 01:04:36,240
and again I'm not a person to press to

1575
01:04:39,829 --> 01:04:37,980
talk about this or identify it's just

1576
01:04:42,049 --> 01:04:39,839
I'm interested in the relevance of how

1577
01:04:44,930 --> 01:04:42,059
can we communicate this to a new

1578
01:04:47,930 --> 01:04:44,940
generation and make it their language

1579
01:04:51,289 --> 01:04:47,940
so what I've noticed what I've read in

1580
01:04:54,170 --> 01:04:51,299
science is that babies are able to do

1581
01:04:56,410 --> 01:04:54,180
statistical analysis like proper

1582
01:04:59,690 --> 01:04:56,420
difficult mathematical probability

1583
01:05:02,270 --> 01:04:59,700
analysis or predicting the type of

1584
01:05:05,890 --> 01:05:02,280
language structure that they'd been

1585
01:05:08,990 --> 01:05:05,900
exposed to and so they're able to

1586
01:05:12,650 --> 01:05:09,000
comprehend of what comes before or after

1587
01:05:14,150 --> 01:05:12,660
so this is what jtpi now open AI kind of

1588
01:05:16,549 --> 01:05:14,160

was talking about

1589
01:05:17,870 --> 01:05:16,559
is that you can understand the language

1590
01:05:19,970 --> 01:05:17,880
without

1591
01:05:22,010 --> 01:05:19,980
by understanding its structure what

1592
01:05:24,109 --> 01:05:22,020
comes before and after

1593
01:05:25,730 --> 01:05:24,119
and this is yet one more leap that we

1594
01:05:28,190 --> 01:05:25,740
haven't done investigating in babies

1595
01:05:31,250 --> 01:05:28,200
because we need to be invented right or

1596
01:05:33,589 --> 01:05:31,260
how can we study babies perception of

1597
01:05:36,530 --> 01:05:33,599
you know language which is yet another

1598
01:05:37,849 --> 01:05:36,540
barrier of how could you understand what

1599
01:05:39,470 --> 01:05:37,859
they're grasping and what they're not

1600
01:05:42,710 --> 01:05:39,480
and there's some clever scientists

1601
01:05:45,170 --> 01:05:42,720
who've designed experiments to show that

1602
01:05:47,390 --> 01:05:45,180
at about between six and nine months the

1603
01:05:49,010 --> 01:05:47,400
window from birth so six at nine months

1604
01:05:51,490 --> 01:05:49,020
so they're in the first within the first

1605
01:05:55,730 --> 01:05:51,500
year the baby

1606
01:05:58,910 --> 01:05:55,740
adapts a particular model of what the

1607
01:06:01,490 --> 01:05:58,920
language is and beyond that it becomes

1608
01:06:03,170 --> 01:06:01,500
a basement you know like in the building

1609
01:06:05,089 --> 01:06:03,180
there's a basement that the whole

1610
01:06:08,510 --> 01:06:05,099
structure is built I mean I prefer to

1611
01:06:10,910 --> 01:06:08,520
talk about it like a map of the city

1612
01:06:12,589 --> 01:06:10,920
so they've networked how you would

1613
01:06:15,710 --> 01:06:12,599

navigate the city if you take a language

1614
01:06:18,410 --> 01:06:15,720
as a city then how do you navigate all

1615
01:06:20,809 --> 01:06:18,420
those roles of switching getting it from

1616
01:06:24,289 --> 01:06:20,819
one end of the town to another and what

1617
01:06:27,710 --> 01:06:24,299
transport you would use or do you go

1618
01:06:30,410 --> 01:06:27,720
by train or by bus or do you walk or do

1619
01:06:32,630 --> 01:06:30,420
you take shortcuts and once that map

1620
01:06:34,670 --> 01:06:32,640
laid down then if you come in with a

1621
01:06:37,670 --> 01:06:34,680
different language or a different way of

1622
01:06:40,430 --> 01:06:37,680
communicating you have to do

1623
01:06:42,230 --> 01:06:40,440
you have to break houses you have to

1624
01:06:45,349 --> 01:06:42,240
reconstruct the roads you have to

1625
01:06:48,170 --> 01:06:45,359
reconstruct the transportation system or

1626
01:06:50,029 --> 01:06:48,180
you even have to do a circular right

1627
01:06:52,430 --> 01:06:50,039
round the city to get to the other side

1628
01:06:56,270 --> 01:06:52,440
quicker and that's what happens in the

1629
01:06:57,890 --> 01:06:56,280
baby's brain so by nine months we've in

1630
01:06:59,630 --> 01:06:57,900
a way lost it I mean of course we can

1631
01:07:01,549 --> 01:06:59,640
learn a language later nobody denies

1632
01:07:03,049 --> 01:07:01,559
that but it's just what effort and how

1633
01:07:05,630 --> 01:07:03,059
fundamental it is

1634
01:07:08,630 --> 01:07:05,640
and what we do find out is that babies

1635
01:07:12,410 --> 01:07:08,640
can learn any language so for example a

1636
01:07:13,250 --> 01:07:12,420
Japanese baby is born in England yeah in

1637
01:07:16,190 --> 01:07:13,260
their

1638
01:07:18,829 --> 01:07:16,200

exposed to both English and Japanese and

1639
01:07:21,410 --> 01:07:18,839
they would be able to perceive or in

1640
01:07:23,270 --> 01:07:21,420
terms of audio a language to the the

1641
01:07:25,250 --> 01:07:23,280
letter L

1642
01:07:26,710 --> 01:07:25,260
and they'll be able to hear it and also

1643
01:07:29,809 --> 01:07:26,720
speak about it and the same is actually

1644
01:07:32,569 --> 01:07:29,819
for Chinese language but if they're born

1645
01:07:34,910 --> 01:07:32,579
in China or in Japan and they have never

1646
01:07:38,750 --> 01:07:34,920
been exposed to these sounds elsewhere

1647
01:07:40,370 --> 01:07:38,760
they're actually unable not only to hear

1648
01:07:42,289 --> 01:07:40,380
them but they and because they can't

1649
01:07:43,069 --> 01:07:42,299
hear them they guess you can't pronounce

1650
01:07:45,230 --> 01:07:43,079
them

1651
01:07:48,829 --> 01:07:45,240
which is interesting and this is just

1652
01:07:50,510 --> 01:07:48,839
one example of how this would reflect so

1653
01:07:52,910 --> 01:07:50,520
you are just you're losing the

1654
01:07:54,890 --> 01:07:52,920
sensitivity to particular sounds and

1655
01:07:57,950 --> 01:07:54,900
you're unable to hear them

1656
01:08:00,770 --> 01:07:57,960
and also as babies develop or as babies

1657
01:08:02,210 --> 01:08:00,780
we can hear different frequency as we

1658
01:08:04,970 --> 01:08:02,220
become adults

1659
01:08:06,890 --> 01:08:04,980
so we are our ability to absorb the

1660
01:08:11,089 --> 01:08:06,900
types of frequency decreases as we get

1661
01:08:14,329 --> 01:08:11,099
older but my view my perception is that

1662
01:08:15,829 --> 01:08:14,339
if language restricts us so this is my

1663
01:08:19,370 --> 01:08:15,839

kind of questions that I want to

1664
01:08:22,430 --> 01:08:19,380
investigate further that if we're able

1665
01:08:24,050 --> 01:08:22,440
to leave it open or wide this perception

1666
01:08:26,450 --> 01:08:24,060
of frequencies and continuously

1667
01:08:29,150 --> 01:08:26,460
stimulate this Pathways just like it was

1668
01:08:31,970 --> 01:08:29,160
in Native or cultures that live among

1669
01:08:33,349 --> 01:08:31,980
nature and we do know they have a better

1670
01:08:36,169 --> 01:08:33,359
hearing and perception and

1671
01:08:38,510 --> 01:08:36,179
differentiation of species than we do in

1672
01:08:40,309 --> 01:08:38,520
the city and in fact some words can't

1673
01:08:44,030 --> 01:08:40,319
even hear when somebody says did you

1674
01:08:46,269 --> 01:08:44,040
hear that if we go to a particular

1675
01:08:49,669 --> 01:08:46,279
location in nature and we're just unable

1676
01:08:51,950 --> 01:08:49,679
to hear some insects or some frogs or

1677
01:08:53,990 --> 01:08:51,960
some frequencies but native cultures are

1678
01:08:54,890 --> 01:08:54,000
able to they can tell a lot what that

1679
01:08:57,349 --> 01:08:54,900
means

1680
01:09:00,169 --> 01:08:57,359
and it is another language so this is

1681
01:09:02,630 --> 01:09:00,179
where I thought that if we could and I

1682
01:09:04,430 --> 01:09:02,640
have very good Concepts I think that I'm

1683
01:09:06,769 --> 01:09:04,440
grasping at the moment and trying to

1684
01:09:08,689 --> 01:09:06,779
make them physical on how can we

1685
01:09:12,050 --> 01:09:08,699
introduce this type of language through

1686
01:09:14,150 --> 01:09:12,060
sound and image to the babies and that

1687
01:09:16,189 --> 01:09:14,160
becomes the language of its own and then

1688
01:09:18,470 --> 01:09:16,199

if we tie this back into what we're

1689
01:09:20,150 --> 01:09:18,480
talking about that people connect easily

1690
01:09:21,530 --> 01:09:20,160
when they have the same language or

1691
01:09:24,530 --> 01:09:21,540
culture

1692
01:09:27,829 --> 01:09:24,540
it's that if you can imagine the person

1693
01:09:29,450 --> 01:09:27,839
from Australia for example and Canada or

1694
01:09:31,849 --> 01:09:29,460
they have similar language but let's see

1695
01:09:34,430 --> 01:09:31,859
we take Portuguese and someone from

1696
01:09:36,349 --> 01:09:34,440
Vietnam right in principle they're in

1697
01:09:39,050 --> 01:09:36,359
such different places and they're on

1698
01:09:41,809 --> 01:09:39,060
different side of equator and yet when

1699
01:09:43,249 --> 01:09:41,819
they would come to the forest and do you

1700
01:09:46,189 --> 01:09:43,259
know that frogs are all over the planet

1701
01:09:48,650 --> 01:09:46,199
and crickets are all over the planet but

1702
01:09:50,570 --> 01:09:48,660
there's so many species of those and if

1703
01:09:51,470 --> 01:09:50,580
you're able to hear that and so I

1704
01:09:54,590 --> 01:09:51,480
personally

1705
01:09:56,030 --> 01:09:54,600
when I hear crickets it Associates with

1706
01:09:58,189 --> 01:09:56,040
me with a particular good feeling

1707
01:10:01,010 --> 01:09:58,199
because I had really good experience

1708
01:10:03,350 --> 01:10:01,020
with listening to crickets as I was

1709
01:10:04,970 --> 01:10:03,360
living in Cyprus and it just you

1710
01:10:06,650 --> 01:10:04,980
suddenly get immersed into this it's

1711
01:10:09,530 --> 01:10:06,660
sort of like a cradle

1712
01:10:11,090 --> 01:10:09,540
you know music but everything is all

1713
01:10:13,850 --> 01:10:11,100

right and everything is stable because

1714
01:10:17,330 --> 01:10:13,860
crickets actually stop their noise if

1715
01:10:18,950 --> 01:10:17,340
there is something inconvenient to them

1716
01:10:20,750 --> 01:10:18,960
or something that's bad for them and

1717
01:10:22,850 --> 01:10:20,760
that's what Native cultures tune in it's

1718
01:10:25,430 --> 01:10:22,860
just like one species stop speaking

1719
01:10:27,290 --> 01:10:25,440
there's a disturbance in the field

1720
01:10:29,510 --> 01:10:27,300
and it's an information it's a language

1721
01:10:32,149 --> 01:10:29,520
but I'm talking deeper than that I'm

1722
01:10:34,510 --> 01:10:32,159
talking about literally understanding

1723
01:10:36,770 --> 01:10:34,520
because a cold cricket

1724
01:10:38,209 --> 01:10:36,780
sounds differently to a worm Cricket

1725
01:10:40,550 --> 01:10:38,219
apparently

1726
01:10:43,189 --> 01:10:40,560
and even if you've never heard a cricket

1727
01:10:44,750 --> 01:10:43,199
before and you would hear those two

1728
01:10:46,729 --> 01:10:44,760
different recordings you will understand

1729
01:10:49,370 --> 01:10:46,739
that that's a cool cricket

1730
01:10:51,770 --> 01:10:49,380
and this is a cricket that is quite warm

1731
01:10:53,990 --> 01:10:51,780
and that's interesting and I think why

1732
01:10:57,590 --> 01:10:54,000
should we desensitize children or not

1733
01:10:59,810 --> 01:10:57,600
exposed to this early when so ancient

1734
01:11:02,630 --> 01:10:59,820
cultures and Native cultures we have

1735
01:11:05,870 --> 01:11:02,640
been exposed and I think that's a new

1736
01:11:08,930 --> 01:11:05,880
way of connecting us as a single

1737
01:11:10,850 --> 01:11:08,940
organism on Earth is to hear those other

1738
01:11:13,130 --> 01:11:10,860

species that have been connecting us for

1739
01:11:16,010 --> 01:11:13,140
generations and only recently we stopped

1740
01:11:17,390 --> 01:11:16,020
hearing that there's a modern society

1741
01:11:19,490 --> 01:11:17,400
wow

1742
01:11:22,189 --> 01:11:19,500
something that I'm so struck by

1743
01:11:23,630 --> 01:11:22,199
listening to you talk is that it seems

1744
01:11:25,490 --> 01:11:23,640
like and you can correct me if I'm wrong

1745
01:11:27,590 --> 01:11:25,500
but it seems like it would be very easy

1746
01:11:29,410 --> 01:11:27,600
for and perhaps this is exactly what's

1747
01:11:33,050 --> 01:11:29,420
happened to us it'd be very easy to lose

1748
01:11:36,050 --> 01:11:33,060
large swaths of meaning and potentially

1749
01:11:37,729 --> 01:11:36,060
even capabilities like human

1750
01:11:40,729 --> 01:11:37,739
capabilities in just a couple of

1751
01:11:43,010 --> 01:11:40,739
generations simply by cutting ourselves

1752
01:11:44,630 --> 01:11:43,020
off from our environment am I

1753
01:11:46,130 --> 01:11:44,640
understanding that correctly is that how

1754
01:11:49,430 --> 01:11:46,140
you view it

1755
01:11:52,850 --> 01:11:49,440
yes so another research that I come

1756
01:11:54,669 --> 01:11:52,860
across that is important for us to be

1757
01:11:58,490 --> 01:11:54,679
aware there's a condition called

1758
01:12:01,250 --> 01:11:58,500
synesthesia and synesthesia is when we

1759
01:12:04,370 --> 01:12:01,260
experience inputs through one sense for

1760
01:12:07,370 --> 01:12:04,380
example straw hearing but in the brain

1761
01:12:09,169 --> 01:12:07,380
there is an image being formed in the

1762
01:12:12,050 --> 01:12:09,179
visual field so

1763
01:12:13,850 --> 01:12:12,060

or some musicians see music and color so

1764
01:12:16,850 --> 01:12:13,860
that would be one form of synesthesia

1765
01:12:19,370 --> 01:12:16,860
and if you take as many perceptual

1766
01:12:21,950 --> 01:12:19,380
senses as we have and there is cross

1767
01:12:24,890 --> 01:12:21,960
connections in different individuals it

1768
01:12:27,070 --> 01:12:24,900
is science sort of at the moment reports

1769
01:12:30,410 --> 01:12:27,080
that about four percent of population

1770
01:12:32,270 --> 01:12:30,420
this is comes through if you wish but

1771
01:12:35,510 --> 01:12:32,280
also what's interesting is that as

1772
01:12:39,530 --> 01:12:35,520
babies we are all synesthetes so we all

1773
01:12:42,050 --> 01:12:39,540
have the ability to wire one sense to

1774
01:12:45,770 --> 01:12:42,060
another so for example if the person is

1775
01:12:49,610 --> 01:12:45,780
born blind congenitally blind they're

1776
01:12:52,010 --> 01:12:49,620
able to utilize other senses that they

1777
01:12:55,850 --> 01:12:52,020
otherwise the visual cortex would map to

1778
01:12:58,850 --> 01:12:55,860
but equally if the baby is for example

1779
01:13:01,070 --> 01:12:58,860
exposed to cross-sensory modality and it

1780
01:13:05,270 --> 01:13:01,080
remains through their life so for

1781
01:13:07,850 --> 01:13:05,280
example maybe the this is my theoretical

1782
01:13:10,850 --> 01:13:07,860
so this is not to say that the science

1783
01:13:13,490 --> 01:13:10,860
already knows this right but what we do

1784
01:13:16,010 --> 01:13:13,500
know is that cine States who have this

1785
01:13:17,810 --> 01:13:16,020
ability they are much better in

1786
01:13:19,970 --> 01:13:17,820
linguistic ability

1787
01:13:21,410 --> 01:13:19,980
they're much better problem solvers they

1788
01:13:24,470 --> 01:13:21,420

have better memory

1789
01:13:26,510 --> 01:13:24,480
and they connect information in the way

1790
01:13:29,390 --> 01:13:26,520
that people who do not have synesthesia

1791
01:13:32,810 --> 01:13:29,400
they problem solve in a novel way in a

1792
01:13:34,430 --> 01:13:32,820
very creative way because in so it's

1793
01:13:36,709 --> 01:13:34,440
like they're using different type of

1794
01:13:38,810 --> 01:13:36,719
resources that are available to them so

1795
01:13:40,790 --> 01:13:38,820
it's always like using one tool or you

1796
01:13:43,189 --> 01:13:40,800
have six to choose from how do you

1797
01:13:45,410 --> 01:13:43,199
connect information and synesthetes

1798
01:13:48,530 --> 01:13:45,420
because of this cross model connection

1799
01:13:50,510 --> 01:13:48,540
between sensors they're able to

1800
01:13:52,430 --> 01:13:50,520
visualize information differently they

1801
01:13:56,630 --> 01:13:52,440
have many more cues

1802
01:13:58,250 --> 01:13:56,640
so I'm just writing a chapter about this

1803
01:14:01,370 --> 01:13:58,260
aspect of synesthesia and how it could

1804
01:14:04,250 --> 01:14:01,380
be helpful if it is if there's a way to

1805
01:14:06,530 --> 01:14:04,260
retain it if we all have it

1806
01:14:07,790 --> 01:14:06,540
got emotional listening just now is like

1807
01:14:09,770 --> 01:14:07,800
wow

1808
01:14:12,590 --> 01:14:09,780
that's really I mean seriously I think

1809
01:14:14,930 --> 01:14:12,600
what you're doing IA is

1810
01:14:17,570 --> 01:14:14,940
seriously helping humans survive what's

1811
01:14:19,630 --> 01:14:17,580
going on now into the future I think

1812
01:14:22,970 --> 01:14:19,640
this work is so

1813
01:14:24,649 --> 01:14:22,980

necessary I completely agree I think the

1814
01:14:28,669 --> 01:14:24,659
ideas are so important

1815
01:14:31,850 --> 01:14:28,679
yeah I feel like part of my job is so I

1816
01:14:33,770 --> 01:14:31,860
meet people like IA and Tyler right and

1817
01:14:35,570 --> 01:14:33,780
he was so Innovative and so on The

1818
01:14:37,490 --> 01:14:35,580
Cutting Edge that most people couldn't

1819
01:14:39,410 --> 01:14:37,500
even understand what he was doing you

1820
01:14:42,470 --> 01:14:39,420
know and I feel like he is one of these

1821
01:14:47,870 --> 01:14:42,480
people she's so she's so in this doing

1822
01:14:50,630 --> 01:14:47,880
what nobody's doing nobody's done and so

1823
01:14:52,370 --> 01:14:50,640
it's our job to kind of translate her

1824
01:14:54,649 --> 01:14:52,380
what she's doing because it's so

1825
01:14:56,870 --> 01:14:54,659
necessary for us too and I think that's

1826
01:14:59,209 --> 01:14:56,880
like Edgar Mitchell you know those

1827
01:15:01,370 --> 01:14:59,219
people on the very Cutting Edge of our

1828
01:15:04,070 --> 01:15:01,380
science oftentimes they're not even

1829
01:15:08,450 --> 01:15:04,080
understood in their time and we can't

1830
01:15:11,350 --> 01:15:08,460
afford that right now yes so Diana

1831
01:15:15,290 --> 01:15:11,360
you're absolutely right and equally so

1832
01:15:16,970 --> 01:15:15,300
we uh unable to do this on our own

1833
01:15:20,689 --> 01:15:16,980
yeah that's the thing

1834
01:15:23,450 --> 01:15:20,699
so it's about forging the connections

1835
01:15:26,149 --> 01:15:23,460
and because Justice in accident

1836
01:15:29,510 --> 01:15:26,159
investigation right in creating or

1837
01:15:32,090 --> 01:15:29,520
reporting culture it's all expertise are

1838
01:15:35,149 --> 01:15:32,100

necessary there isn't one single person

1839
01:15:36,470 --> 01:15:35,159
who can achieve something substantial or

1840
01:15:38,870 --> 01:15:36,480
impactful

1841
01:15:41,450 --> 01:15:38,880
I am building my work on the research

1842
01:15:44,330 --> 01:15:41,460
that has been done right and I

1843
01:15:46,729 --> 01:15:44,340
absolutely need people who are good at

1844
01:15:49,370 --> 01:15:46,739
what they do and how they can contribute

1845
01:15:53,330 --> 01:15:49,380
in the same way I am unable to do this

1846
01:15:55,870 --> 01:15:53,340
on my own I can only initiate I can only

1847
01:15:58,550 --> 01:15:55,880
bring Concepts together I can

1848
01:16:00,770 --> 01:15:58,560
communicate about that and see what

1849
01:16:03,350 --> 01:16:00,780
resonates what have I missed because

1850
01:16:06,470 --> 01:16:03,360
there must be holes in what I'm doing

1851
01:16:10,130 --> 01:16:06,480
and it's about other people who are able

1852
01:16:12,709 --> 01:16:10,140
to meet that specific path then it

1853
01:16:15,890 --> 01:16:12,719
becomes something meaningful and useful

1854
01:16:18,530 --> 01:16:15,900
because just as an engineer designing a

1855
01:16:20,209 --> 01:16:18,540
cockpit for a pilot they cannot flights

1856
01:16:22,010 --> 01:16:20,219
unless they speak to the pilot and

1857
01:16:24,649 --> 01:16:22,020
understand what they need

1858
01:16:27,530 --> 01:16:24,659
so that's the same concept so I'm very

1859
01:16:29,930 --> 01:16:27,540
aware that this is one perspective that

1860
01:16:31,850 --> 01:16:29,940
I share one perspective and there needs

1861
01:16:33,890 --> 01:16:31,860
to be many perspectives this overview

1862
01:16:36,530 --> 01:16:33,900
effect again coming back to what we

1863
01:16:39,410 --> 01:16:36,540

talked before is that all perspectives

1864
01:16:42,709 --> 01:16:39,420
are valid and there's many things I'm

1865
01:16:45,250 --> 01:16:42,719
not seeing so we need to look at this

1866
01:16:47,570 --> 01:16:45,260
innocence from many directions

1867
01:16:48,830 --> 01:16:47,580
otherwise I'm unable to see the full

1868
01:16:52,010 --> 01:16:48,840
picture

1869
01:16:54,709 --> 01:16:52,020
and so I am on the lookout and also

1870
01:16:56,990 --> 01:16:54,719
welcome the input of other individuals

1871
01:16:59,169 --> 01:16:57,000
on what they might contribute and how

1872
01:17:03,010 --> 01:16:59,179
can this be taken forward

1873
01:17:06,530 --> 01:17:03,020
I bought the book I bought your book for

1874
01:17:09,050 --> 01:17:06,540
my friend who has a new baby

1875
01:17:10,430 --> 01:17:09,060
and before I gave it to him I was

1876
01:17:14,390 --> 01:17:10,440
slipping through it and my daughter

1877
01:17:16,370 --> 01:17:14,400
who's 14 came into the room and asked me

1878
01:17:17,930 --> 01:17:16,380
what I was looking at and so I said oh

1879
01:17:19,669 --> 01:17:17,940
here you can look at this and then I was

1880
01:17:21,590 --> 01:17:19,679
doing something else and then when I

1881
01:17:24,169 --> 01:17:21,600
looked at her she read the whole thing

1882
01:17:27,050 --> 01:17:24,179
she read it for hours

1883
01:17:29,990 --> 01:17:27,060
yeah this is it so the idea is that the

1884
01:17:32,450 --> 01:17:30,000
book is shared in the family and I think

1885
01:17:35,750 --> 01:17:32,460
that sharing is so vital

1886
01:17:38,270 --> 01:17:35,760
because if a sibling can pick up and

1887
01:17:41,270 --> 01:17:38,280
read the book with the younger child

1888
01:17:44,930 --> 01:17:41,280

and I think the information and the

1889
01:17:47,330 --> 01:17:44,940
tools should be accessible at all ages

1890
01:17:49,490 --> 01:17:47,340
it's just that it's the level that we're

1891
01:17:52,669 --> 01:17:49,500
able to absorb it it's the same thing so

1892
01:17:55,669 --> 01:17:52,679
with the language of nature or the Earth

1893
01:17:57,169 --> 01:17:55,679
language there's many levels so for

1894
01:17:59,030 --> 01:17:57,179
example I could be standing with a

1895
01:18:02,030 --> 01:17:59,040
native person who lives in that

1896
01:18:03,410 --> 01:18:02,040
particular floor and fauna and I would

1897
01:18:05,270 --> 01:18:03,420
hear one thing but that they hear

1898
01:18:08,090 --> 01:18:05,280
something else and I could learn from

1899
01:18:11,030 --> 01:18:08,100
them of what they're hearing and yet

1900
01:18:12,709 --> 01:18:11,040
when we come both to a city I could tell

1901
01:18:15,169 --> 01:18:12,719
them a lot about the sounds that they

1902
01:18:17,630 --> 01:18:15,179
would not be able to anticipate or aware

1903
01:18:19,610 --> 01:18:17,640
will be overwhelming for them they

1904
01:18:22,370 --> 01:18:19,620
wouldn't be able even to hold it some

1905
01:18:24,530 --> 01:18:22,380
people can't sleep with other noises

1906
01:18:27,169 --> 01:18:24,540
because it actually has physiological

1907
01:18:29,390 --> 01:18:27,179
chemical reactions in the body that they

1908
01:18:32,330 --> 01:18:29,400
are unable to control it's the response

1909
01:18:36,350 --> 01:18:32,340
to sound and we now know so there is a

1910
01:18:38,870 --> 01:18:36,360
scientist Professor Karen Becker that is

1911
01:18:40,610 --> 01:18:38,880
written released a book I think it's

1912
01:18:42,169 --> 01:18:40,620
called

1913
01:18:45,470 --> 01:18:42,179

the

1914
01:18:49,669 --> 01:18:45,480
sound of life or life of sound and she

1915
01:18:52,490 --> 01:18:49,679
talks about research in the cities that

1916
01:18:55,310 --> 01:18:52,500
how sound affects and disrupts our

1917
01:18:57,350 --> 01:18:55,320
health and there are now

1918
01:18:59,330 --> 01:18:57,360
and not just speed cameras or like

1919
01:19:03,110 --> 01:18:59,340
cameras that watch but there is also

1920
01:19:05,630 --> 01:19:03,120
sound cameras that is the detecting the

1921
01:19:08,510 --> 01:19:05,640
sound that could be harmful to us and

1922
01:19:11,750 --> 01:19:08,520
then as just as we have find for us

1923
01:19:14,810 --> 01:19:11,760
speeding this would be also implications

1924
01:19:16,669 --> 01:19:14,820
of what sound we make and then that what

1925
01:19:18,470 --> 01:19:16,679
effect it has on us and you could also

1926
01:19:21,530 --> 01:19:18,480
get fines

1927
01:19:23,510 --> 01:19:21,540
so it's equally disturbing just as their

1928
01:19:26,450 --> 01:19:23,520
car speeding and could hit somebody the

1929
01:19:27,470 --> 01:19:26,460
sound has an impact on our well-being a

1930
01:19:29,450 --> 01:19:27,480
strong one

1931
01:19:32,689 --> 01:19:29,460
mm-hmm

1932
01:19:35,930 --> 01:19:32,699
so am I understanding this correctly in

1933
01:19:38,030 --> 01:19:35,940
saying that as opposed to creating this

1934
01:19:40,189 --> 01:19:38,040
language you're sort of discovering it

1935
01:19:43,250 --> 01:19:40,199
is that a correct way to represent what

1936
01:19:47,990 --> 01:19:43,260
you're doing I feel that it's already

1937
01:19:51,950 --> 01:19:48,000
available there and I think it's how do

1938
01:19:54,830 --> 01:19:51,960

we how much of it do we transcribe you

1939
01:19:57,709 --> 01:19:54,840
know how many dictionaries do we make

1940
01:20:00,590 --> 01:19:57,719
because I feel it's always been

1941
01:20:02,870 --> 01:20:00,600
available it's just are we able to

1942
01:20:04,729 --> 01:20:02,880
articulate it so this is coming back to

1943
01:20:06,169 --> 01:20:04,739
what I was talking about professional

1944
01:20:08,810 --> 01:20:06,179
intuition

1945
01:20:11,870 --> 01:20:08,820
so if you go to a native person who

1946
01:20:14,030 --> 01:20:11,880
lives in nature for them and need a

1947
01:20:16,850 --> 01:20:14,040
dictionary right they just understand it

1948
01:20:19,669 --> 01:20:16,860
but they can't articulate it why they

1949
01:20:22,070 --> 01:20:19,679
suddenly feel very wary

1950
01:20:24,590 --> 01:20:22,080
they may be able to articulate that and

1951
01:20:27,169 --> 01:20:24,600
often they can but sometimes they get

1952
01:20:28,510 --> 01:20:27,179
this feeling and only then they could

1953
01:20:31,130 --> 01:20:28,520
speak

1954
01:20:33,770 --> 01:20:31,140
retrospectively about what that was

1955
01:20:36,050 --> 01:20:33,780
and this is exactly what surgeons do

1956
01:20:38,510 --> 01:20:36,060
right when they are articulating

1957
01:20:39,649 --> 01:20:38,520
something when they are watching the

1958
01:20:42,110 --> 01:20:39,659
footage

1959
01:20:44,450 --> 01:20:42,120
and when they're telling somebody else

1960
01:20:46,910 --> 01:20:44,460
what they were doing they will tell it

1961
01:20:48,590 --> 01:20:46,920
through a different lens so once they

1962
01:20:50,870 --> 01:20:48,600
are explaining what they're doing to a

1963
01:20:53,090 --> 01:20:50,880

student or to another medical younger

1964
01:20:55,550 --> 01:20:53,100
professional they will talk about and

1965
01:20:58,130 --> 01:20:55,560
also do different actions you know so

1966
01:20:59,689 --> 01:20:58,140
the consequences of their actions would

1967
01:21:01,729 --> 01:20:59,699
be different when they're explicating

1968
01:21:04,130 --> 01:21:01,739
and teaching to somebody else

1969
01:21:05,750 --> 01:21:04,140
versus when they're themselves in the

1970
01:21:07,550 --> 01:21:05,760
process and doing something they will

1971
01:21:10,910 --> 01:21:07,560
actually act and do things differently

1972
01:21:14,630 --> 01:21:10,920
and they would not be able to explain it

1973
01:21:16,610 --> 01:21:14,640
but if this was done in silence for

1974
01:21:19,430 --> 01:21:16,620
example and the student was there

1975
01:21:20,930 --> 01:21:19,440
so this is the third scenario and they

1976
01:21:23,149 --> 01:21:20,940
will stop the surgery and the student

1977
01:21:24,709 --> 01:21:23,159
would ask them why did you do that this

1978
01:21:26,630 --> 01:21:24,719
is not by the book

1979
01:21:29,330 --> 01:21:26,640
they will actually give you the answer

1980
01:21:31,070 --> 01:21:29,340
that was not necessarily why they make

1981
01:21:34,130 --> 01:21:31,080
that decision in that way

1982
01:21:36,290 --> 01:21:34,140
because they will put on the filter to

1983
01:21:38,450 --> 01:21:36,300
tell you what would they be not punished

1984
01:21:41,510 --> 01:21:38,460
for or what would they think would make

1985
01:21:43,490 --> 01:21:41,520
sense given the knowledge that they

1986
01:21:46,910 --> 01:21:43,500
think the student would know

1987
01:21:49,330 --> 01:21:46,920
so and in all of those aspects we were

1988
01:21:51,649 --> 01:21:49,340

influenced in our

1989
01:21:54,169 --> 01:21:51,659
interpretation of the environment and

1990
01:21:57,470 --> 01:21:54,179
inputs so like a language

1991
01:22:01,070 --> 01:21:57,480
so in the same way if you are in the

1992
01:22:03,110 --> 01:22:01,080
native environment you know this you may

1993
01:22:05,030 --> 01:22:03,120
understand or not understand or act or

1994
01:22:07,250 --> 01:22:05,040
not act in a certain way

1995
01:22:09,169 --> 01:22:07,260
depending on who is around you so we all

1996
01:22:10,370 --> 01:22:09,179
affect each other and it's important to

1997
01:22:13,610 --> 01:22:10,380
understand

1998
01:22:16,130 --> 01:22:13,620
as much as we can I guess

1999
01:22:19,370 --> 01:22:16,140
but we can filter through our perceptual

2000
01:22:21,470 --> 01:22:19,380
senses and I just want to expand that

2001
01:22:23,450 --> 01:22:21,480
palette because our brain is able to

2002
01:22:27,770 --> 01:22:23,460
perceive more with every generation

2003
01:22:29,330 --> 01:22:27,780
because we are evolving species and look

2004
01:22:33,830 --> 01:22:29,340
at how much informational can process

2005
01:22:36,290 --> 01:22:33,840
Now versus just half a generation away

2006
01:22:39,950 --> 01:22:36,300
but you know that that generation is

2007
01:22:41,890 --> 01:22:39,960
just unable to take in as much as you

2008
01:22:44,510 --> 01:22:41,900
know generation born five years later

2009
01:22:47,390 --> 01:22:44,520
it's that big Elite

2010
01:22:49,669 --> 01:22:47,400
so why not use that capacity for the

2011
01:22:51,669 --> 01:22:49,679
benefit you know why not use that

2012
01:22:55,490 --> 01:22:51,679
capacity to make a better connection

2013
01:22:59,390 --> 01:22:55,500

neurally and culturally and humanely

2014
01:23:01,790 --> 01:22:59,400
with more humility I question yeah that

2015
01:23:03,830 --> 01:23:01,800
I never got to ask you where I think I

2016
01:23:06,830 --> 01:23:03,840
did but I wanted to ask you further

2017
01:23:08,649 --> 01:23:06,840
about it and it's this idea that you

2018
01:23:12,110 --> 01:23:08,659
intuitively

2019
01:23:14,209 --> 01:23:12,120
decided to use traditional songs

2020
01:23:17,930 --> 01:23:14,219
as well as

2021
01:23:20,390 --> 01:23:17,940
sounds from insects and forests and

2022
01:23:24,350 --> 01:23:20,400
things like that and whales even can you

2023
01:23:26,870 --> 01:23:24,360
explain why you chose traditional songs

2024
01:23:29,030 --> 01:23:26,880
so this is all still in the play and

2025
01:23:31,310 --> 01:23:29,040
still in development and as I said you

2026
01:23:33,950 --> 01:23:31,320
know I can't forge the soul alone I

2027
01:23:36,709 --> 01:23:33,960
really want collaboration and people

2028
01:23:40,550 --> 01:23:36,719
with their skills that I don't have but

2029
01:23:44,149 --> 01:23:40,560
the nature of songs native songs is

2030
01:23:47,689 --> 01:23:44,159
because sometimes we underestimate the

2031
01:23:51,169 --> 01:23:47,699
meaning of so I forgot the word for it

2032
01:23:53,510 --> 01:23:51,179
in English so it's the songs that you

2033
01:23:57,550 --> 01:23:53,520
know you will sing to children in the

2034
01:24:00,890 --> 01:23:57,560
night lullaby London by yeah okay

2035
01:24:04,010 --> 01:24:00,900
so the reason I was looking into a

2036
01:24:06,430 --> 01:24:04,020
lullaby specifically from different

2037
01:24:09,590 --> 01:24:06,440
cultures is because there is an element

2038
01:24:11,630 --> 01:24:09,600

that they evolved over time and I think

2039
01:24:13,550 --> 01:24:11,640
there's a much closer connection they to

2040
01:24:15,770 --> 01:24:13,560
Nature because actually a lot of

2041
01:24:19,310 --> 01:24:15,780
lullabies actually do have animals and

2042
01:24:23,270 --> 01:24:19,320
do have seasons and do have vocabulary

2043
01:24:25,610 --> 01:24:23,280
about nature our environment and if you

2044
01:24:27,850 --> 01:24:25,620
would listen to traditional lullabies

2045
01:24:30,649 --> 01:24:27,860
you will see that they are associating

2046
01:24:32,870 --> 01:24:30,659
and kind of relaxing us in this

2047
01:24:35,030 --> 01:24:32,880
particular pattern there is a pattern to

2048
01:24:37,990 --> 01:24:35,040
singing to the voice and Rhythm and

2049
01:24:41,990 --> 01:24:38,000
rhyme but also they're connecting to

2050
01:24:45,410 --> 01:24:42,000
slowing down to closing down to

2051
01:24:48,530 --> 01:24:45,420
sun going down and to being enveloped

2052
01:24:52,070 --> 01:24:48,540
and protected so there is a there is

2053
01:24:56,390 --> 01:24:52,080
this aura some sort of of love and

2054
01:24:59,090 --> 01:24:56,400
protection and ability to relax our

2055
01:25:01,970 --> 01:24:59,100
nervous system as well

2056
01:25:04,070 --> 01:25:01,980
and we naturally do that if we're here a

2057
01:25:05,750 --> 01:25:04,080
lullaby from another culture it almost

2058
01:25:06,830 --> 01:25:05,760
doesn't matter to us we know it is a

2059
01:25:10,910 --> 01:25:06,840
lullaby

2060
01:25:13,189 --> 01:25:10,920
and I think it's important to hear other

2061
01:25:16,729 --> 01:25:13,199
languages as well so this is another

2062
01:25:20,090 --> 01:25:16,739
aspect of that is being exposed to

2063
01:25:23,870 --> 01:25:20,100

otherwise to other structures to it's a

2064
01:25:26,810 --> 01:25:23,880
linguistic pattern and Rhymes have a

2065
01:25:28,850 --> 01:25:26,820
particularly unique structure that also

2066
01:25:31,010 --> 01:25:28,860
it's a way of problem solving right it's

2067
01:25:33,950 --> 01:25:31,020
how do you rhyme these words

2068
01:25:35,390 --> 01:25:33,960
for them to be brutally connected but

2069
01:25:37,490 --> 01:25:35,400
also meaningful

2070
01:25:39,950 --> 01:25:37,500
and you poets who are able to write

2071
01:25:41,630 --> 01:25:39,960
poems very highly intellectual it's a

2072
01:25:45,050 --> 01:25:41,640
problem-solving ability

2073
01:25:46,370 --> 01:25:45,060
and I think why do they survive these

2074
01:25:48,890 --> 01:25:46,380
lullabies this is also another

2075
01:25:52,070 --> 01:25:48,900
interesting question to investigate

2076
01:25:55,130 --> 01:25:52,080
so what is so helpful and why don't we

2077
01:25:57,470 --> 01:25:55,140
study lullabies that if it is a relaxing

2078
01:26:00,649 --> 01:25:57,480
especially in our stressful environment

2079
01:26:02,930 --> 01:26:00,659
so maybe all we need is the tuition to

2080
01:26:06,590 --> 01:26:02,940
some lullabies and to capture our

2081
01:26:08,990 --> 01:26:06,600
grandparents or parents saying and if it

2082
01:26:11,870 --> 01:26:09,000
can calm us down instantaneously because

2083
01:26:14,450 --> 01:26:11,880
our body would respond to it so

2084
01:26:17,930 --> 01:26:14,460
fast because it's ingrained in us it's

2085
01:26:20,450 --> 01:26:17,940
wired in US why not use that so there

2086
01:26:22,910 --> 01:26:20,460
are many aspects of why I've chose

2087
01:26:24,709 --> 01:26:22,920
that so it's again about connecting

2088
01:26:25,490 --> 01:26:24,719

cultures

2089
01:26:28,310 --> 01:26:25,500
um

2090
01:26:31,070 --> 01:26:28,320
so if we're talking about discovering

2091
01:26:33,110 --> 01:26:31,080
this Earth language is this something

2092
01:26:36,010 --> 01:26:33,120
that we could potentially in the future

2093
01:26:39,470 --> 01:26:36,020
use to have some kind of communication

2094
01:26:41,270 --> 01:26:39,480
with nature whether it be animals or a

2095
01:26:42,950 --> 01:26:41,280
tree or something else is that something

2096
01:26:45,290 --> 01:26:42,960
that you feel like it could be possible

2097
01:26:47,629 --> 01:26:45,300
with this sort of modality

2098
01:26:48,350 --> 01:26:47,639
yes so for example when you learn a

2099
01:26:51,350 --> 01:26:48,360
language

2100
01:26:53,950 --> 01:26:51,360
you go from not knowing it all and then

2101
01:26:57,649 --> 01:26:53,960
suddenly Concepts make sense one word

2102
01:27:00,649 --> 01:26:57,659
carries a concept or one phrase or a

2103
01:27:01,669 --> 01:27:00,659
turn of phrase or an intonation makes a

2104
01:27:03,890 --> 01:27:01,679
difference

2105
01:27:06,530 --> 01:27:03,900
so there is a lot of information carried

2106
01:27:09,890 --> 01:27:06,540
in just me speaking with you

2107
01:27:12,290 --> 01:27:09,900
right now and you are hearing much more

2108
01:27:14,209 --> 01:27:12,300
than the word I say

2109
01:27:19,790 --> 01:27:14,219
and the same way

2110
01:27:22,729 --> 01:27:19,800
I believe that we would by listening and

2111
01:27:24,410 --> 01:27:22,739
seeing so by forming so these components

2112
01:27:26,750 --> 01:27:24,420
of the language of the visual component

2113
01:27:28,850 --> 01:27:26,760

and also audio component and anything

2114
01:27:31,610 --> 01:27:28,860
that comes with audio from

2115
01:27:34,250 --> 01:27:31,620
rhyme to intonation to

2116
01:27:36,229 --> 01:27:34,260
various types of connection to what we

2117
01:27:38,689 --> 01:27:36,239
make when we linguistically study the

2118
01:27:40,850 --> 01:27:38,699
language and what connects it to an

2119
01:27:42,890 --> 01:27:40,860
actual voice component of the language

2120
01:27:45,890 --> 01:27:42,900
so for example you know some people ask

2121
01:27:47,270 --> 01:27:45,900
a question in one language and they

2122
01:27:50,270 --> 01:27:47,280
would rise in intonation and another

2123
01:27:54,229 --> 01:27:50,280
they will decrease and you could use the

2124
01:27:55,970 --> 01:27:54,239
same grammatically the same sentence but

2125
01:27:58,070 --> 01:27:55,980
depending how you use intonation it will

2126
01:28:01,189 --> 01:27:58,080
either be a question or it would be a

2127
01:28:05,390 --> 01:28:01,199
statement and in the same way I believe

2128
01:28:08,990 --> 01:28:05,400
that by letting a new generation here

2129
01:28:11,510 --> 01:28:09,000
a different type of sounds and

2130
01:28:13,550 --> 01:28:11,520
Associated images with that

2131
01:28:16,790 --> 01:28:13,560
they would make the connection that we

2132
01:28:20,330 --> 01:28:16,800
are unable to make it as adults so the

2133
01:28:23,030 --> 01:28:20,340
brain the Baby Genius will will make

2134
01:28:25,129 --> 01:28:23,040
that connection or they may not it's

2135
01:28:28,610 --> 01:28:25,139
either way but the point is that there

2136
01:28:30,530 --> 01:28:28,620
will be a leap of appreciation that

2137
01:28:33,229 --> 01:28:30,540
these sounds are meaningful

2138
01:28:35,689 --> 01:28:33,239

then the meaning is found we find

2139
01:28:38,030 --> 01:28:35,699
meaning just in

2140
01:28:41,330 --> 01:28:38,040
and sticks right the letters it just

2141
01:28:43,250 --> 01:28:41,340
sticks put together and suddenly that

2142
01:28:45,410 --> 01:28:43,260
makes sense after a while after you've

2143
01:28:47,110 --> 01:28:45,420
been looking at it intently

2144
01:28:50,090 --> 01:28:47,120
it makes sense and this is what

2145
01:28:51,290 --> 01:28:50,100
investigators and researchers and Native

2146
01:28:53,330 --> 01:28:51,300
cultures you don't have to be a

2147
01:28:55,370 --> 01:28:53,340
scientist or you could be just a curious

2148
01:28:58,310 --> 01:28:55,380
person to make a meaning out of

2149
01:29:00,950 --> 01:28:58,320
something that was not there before

2150
01:29:02,689 --> 01:29:00,960
it's a very difficult concept to

2151
01:29:04,310 --> 01:29:02,699
describe how does the meaning arise or

2152
01:29:06,770 --> 01:29:04,320
how does believe arise I mean that's

2153
01:29:09,770 --> 01:29:06,780
Diana's what sticks do you have to put

2154
01:29:11,209 --> 01:29:09,780
together to have a billion in a way so

2155
01:29:13,310 --> 01:29:11,219
you know stick could be anything it's

2156
01:29:15,110 --> 01:29:13,320
just representation of a piece of

2157
01:29:17,810 --> 01:29:15,120
information that you are taking in

2158
01:29:21,950 --> 01:29:17,820
through one or another receptor

2159
01:29:24,649 --> 01:29:21,960
so yes I believe so that they would have

2160
01:29:26,570 --> 01:29:24,659
a meaning and computers now discovering

2161
01:29:28,070 --> 01:29:26,580
a meaning in certain sounds because

2162
01:29:30,830 --> 01:29:28,080
they're able to differentiate better

2163
01:29:33,229 --> 01:29:30,840

granularity because our perceptors

2164
01:29:36,290 --> 01:29:33,239
are unable to read those frequencies

2165
01:29:39,590 --> 01:29:36,300
either because we lost them or we never

2166
01:29:40,610 --> 01:29:39,600
had them but nonetheless there is a

2167
01:29:43,729 --> 01:29:40,620
meaning

2168
01:29:45,950 --> 01:29:43,739
assigned so I think if our brain can be

2169
01:29:48,590 --> 01:29:45,960
wired to a new language or to any

2170
01:29:50,629 --> 01:29:48,600
language why not to this what could this

2171
01:29:53,930 --> 01:29:50,639
be not a language

2172
01:29:55,729 --> 01:29:53,940
that makes sense is there

2173
01:29:58,910 --> 01:29:55,739
I know there's no way for you to know

2174
01:30:03,229 --> 01:29:58,920
but do you suspect that this Earth

2175
01:30:05,629 --> 01:30:03,239
language is so specific to Earth that it

2176
01:30:07,010 --> 01:30:05,639
would maybe not be intelligible just a

2177
01:30:09,110 --> 01:30:07,020
non-human intelligence from another

2178
01:30:10,610 --> 01:30:09,120
planet who is working within the same

2179
01:30:12,410 --> 01:30:10,620
framework or do you think that there's a

2180
01:30:14,629 --> 01:30:12,420
potential that this is something that

2181
01:30:17,450 --> 01:30:14,639
could be Universal

2182
01:30:20,209 --> 01:30:17,460
this question is so loaded I think if we

2183
01:30:22,010 --> 01:30:20,219
ground it a little bit into what we know

2184
01:30:25,430 --> 01:30:22,020
because obviously you haven't been to

2185
01:30:28,070 --> 01:30:25,440
another planet and even to the moon what

2186
01:30:31,669 --> 01:30:28,080
would be nice to think about in this way

2187
01:30:33,890 --> 01:30:31,679
is that we know couches are able to tell

2188
01:30:35,390 --> 01:30:33,900

what happens to their family when we

2189
01:30:36,470 --> 01:30:35,400
don't have to go in even to Native

2190
01:30:41,510 --> 01:30:36,480
cultures

2191
01:30:44,530 --> 01:30:41,520
we're able to tell

2192
01:30:47,689 --> 01:30:44,540
that something is happening with another

2193
01:30:50,030 --> 01:30:47,699
family member so then how do we know

2194
01:30:51,290 --> 01:30:50,040
this you know there are many ways of

2195
01:30:52,970 --> 01:30:51,300
looking at it there is research on

2196
01:30:55,370 --> 01:30:52,980
coincidences

2197
01:30:58,629 --> 01:30:55,380
and Rupert sheldrake so the British

2198
01:31:02,629 --> 01:30:58,639
scientists and biologist who was doing

2199
01:31:04,970 --> 01:31:02,639
research into US knowing who will call

2200
01:31:06,830 --> 01:31:04,980
you for example he wrote a book about

2201
01:31:08,870 --> 01:31:06,840
seven experiments that would change the

2202
01:31:12,830 --> 01:31:08,880
world which is quite interesting it's

2203
01:31:16,250 --> 01:31:12,840
our ability to perceive information on

2204
01:31:19,370 --> 01:31:16,260
meaning from something that is not

2205
01:31:20,570 --> 01:31:19,380
linguistic right it is also a way of

2206
01:31:24,110 --> 01:31:20,580
communicating

2207
01:31:27,410 --> 01:31:24,120
I visited cultures that are able to tell

2208
01:31:31,070 --> 01:31:27,420
just by looking at you where you might

2209
01:31:34,250 --> 01:31:31,080
have a medical condition or by the way

2210
01:31:36,169 --> 01:31:34,260
you sound they will be able to tell what

2211
01:31:37,790 --> 01:31:36,179
your status and it actually doesn't have

2212
01:31:39,649 --> 01:31:37,800
to go to indigenous cultures you know if

2213
01:31:41,270 --> 01:31:39,659

you know a person really well you would

2214
01:31:43,010 --> 01:31:41,280
be able to tell from the sound of their

2215
01:31:45,770 --> 01:31:43,020
voice if they are feeling well or not

2216
01:31:47,330 --> 01:31:45,780
well right if it is your close friend or

2217
01:31:51,649 --> 01:31:47,340
family member

2218
01:31:54,590 --> 01:31:51,659
so it's about finding these Clues I'm

2219
01:31:57,169 --> 01:31:54,600
talking about breadcrumbs taking little

2220
01:32:00,290 --> 01:31:57,179
steps and seeing where they lead

2221
01:32:03,490 --> 01:32:00,300
and I feel that

2222
01:32:06,410 --> 01:32:03,500
this is kind of somewhat scientific

2223
01:32:07,550 --> 01:32:06,420
Beginnings or it's a concept that's

2224
01:32:08,750 --> 01:32:07,560
emerging

2225
01:32:10,729 --> 01:32:08,760
and

2226
01:32:12,890 --> 01:32:10,739
maybe native cultures are able to

2227
01:32:14,149 --> 01:32:12,900
interpret nature sounds and they're

2228
01:32:16,550 --> 01:32:14,159
meaningful to them but they can't

2229
01:32:18,950 --> 01:32:16,560
explain it to us but maybe by

2230
01:32:22,310 --> 01:32:18,960
introducing this in a slightly different

2231
01:32:23,990 --> 01:32:22,320
way from kind of modern society we're

2232
01:32:25,910 --> 01:32:24,000
able to tap into it from a different

2233
01:32:29,390 --> 01:32:25,920
direction and hence

2234
01:32:31,070 --> 01:32:29,400
than being able to perceive the meaning

2235
01:32:33,709 --> 01:32:31,080
of sounds

2236
01:32:36,229 --> 01:32:33,719
that are not familiar to us you know

2237
01:32:37,850 --> 01:32:36,239
like to me as a mother but maybe my

2238
01:32:41,270 --> 01:32:37,860

children would be able to have meaning

2239
01:32:44,090 --> 01:32:41,280
to that so what is not to say that they

2240
01:32:46,310 --> 01:32:44,100
will perceive so what the wind is saying

2241
01:32:48,590 --> 01:32:46,320
because native cultures can and that's

2242
01:32:51,590 --> 01:32:48,600
nature speaking tree speaking I don't

2243
01:32:54,530 --> 01:32:51,600
know you know who is that speaking so

2244
01:32:57,169 --> 01:32:54,540
it's another being how intelligent this

2245
01:33:00,830 --> 01:32:57,179
is a big debate right of what is

2246
01:33:02,870 --> 01:33:00,840
intelligent or not I've read a work of I

2247
01:33:06,050 --> 01:33:02,880
will just remember the name so it's

2248
01:33:09,229 --> 01:33:06,060
Stefan bachner who wrote a book called

2249
01:33:11,689 --> 01:33:09,239
plant intelligence he's about biochemist

2250
01:33:15,169 --> 01:33:11,699
and he has a family of generations

2251
01:33:18,350 --> 01:33:15,179
actually physicians in early 1900s

2252
01:33:21,830 --> 01:33:18,360
and they are able to look at the person

2253
01:33:23,689 --> 01:33:21,840
and the plant the right plant would come

2254
01:33:26,149 --> 01:33:23,699
to them of what will help with their

2255
01:33:29,450 --> 01:33:26,159
condition so this is a person

2256
01:33:32,689 --> 01:33:29,460
living in the U.S right now who is

2257
01:33:35,030 --> 01:33:32,699
successfully picking Botanical medicine

2258
01:33:37,550 --> 01:33:35,040
to suit the individual and can explain

2259
01:33:40,910 --> 01:33:37,560
it really well using scientific language

2260
01:33:43,250 --> 01:33:40,920
she studied biochemistry as well

2261
01:33:47,450 --> 01:33:43,260
another person is a scientist Monica

2262
01:33:48,410 --> 01:33:47,460
Gagliano she wrote a book Thus Spoke the

2263
01:33:51,890 --> 01:33:48,420

plant

2264
01:33:55,669 --> 01:33:51,900
so she designed experiment where she

2265
01:33:58,910 --> 01:33:55,679
played a sound of running water and

2266
01:34:01,310 --> 01:33:58,920
created Tunnels for the plants to push

2267
01:34:02,209 --> 01:34:01,320
its roots through right to the source of

2268
01:34:04,430 --> 01:34:02,219
water

2269
01:34:06,110 --> 01:34:04,440
and apparently the plants can hear

2270
01:34:08,510 --> 01:34:06,120
who would have known

2271
01:34:10,250 --> 01:34:08,520
and there are many experiments on plants

2272
01:34:13,850 --> 01:34:10,260
that they're able to communicate each

2273
01:34:16,129 --> 01:34:13,860
other and it seems like able to hear a

2274
01:34:18,530 --> 01:34:16,139
munching insect

2275
01:34:21,649 --> 01:34:18,540
there is a insect that could destroy

2276
01:34:23,870 --> 01:34:21,659
them and the insect that will not harm

2277
01:34:25,250 --> 01:34:23,880
them but they're both munching and they

2278
01:34:28,550 --> 01:34:25,260
will differentiate between the two and

2279
01:34:31,490 --> 01:34:28,560
react appropriately so why can't we

2280
01:34:34,370 --> 01:34:31,500
speak to the plant if we understand how

2281
01:34:35,450 --> 01:34:34,380
if they can hear water well we can hear

2282
01:34:37,550 --> 01:34:35,460
water

2283
01:34:40,790 --> 01:34:37,560
it's all about time perception isn't

2284
01:34:42,770 --> 01:34:40,800
that if we put the tap on and want the

2285
01:34:44,629 --> 01:34:42,780
plant to react it's just going to take

2286
01:34:46,250 --> 01:34:44,639
if they don't have an instantaneous

2287
01:34:48,649 --> 01:34:46,260
reaction that would need time to grow

2288
01:34:50,750 --> 01:34:48,659

their roots to communicate so it's which

2289
01:34:53,570 --> 01:34:50,760
time scale are we perceiving

2290
01:34:55,610 --> 01:34:53,580
so time is a big factor in language and

2291
01:34:57,229 --> 01:34:55,620
meaning so if you're in the conversation

2292
01:35:00,590 --> 01:34:57,239
and you lost the beginning you kind of

2293
01:35:02,149 --> 01:35:00,600
lost the thread altogether you may never

2294
01:35:04,970 --> 01:35:02,159
retain it back

2295
01:35:06,590 --> 01:35:04,980
Justin is in our podcast if I missed

2296
01:35:08,990 --> 01:35:06,600
your question at the very beginning I

2297
01:35:10,669 --> 01:35:09,000
can't actually make sense of it and want

2298
01:35:12,649 --> 01:35:10,679
to make sure I understood

2299
01:35:15,350 --> 01:35:12,659
so

2300
01:35:18,470 --> 01:35:15,360
we're discovering things all the time I

2301
01:35:21,649 --> 01:35:18,480
very much see that we should make steps

2302
01:35:23,350 --> 01:35:21,659
to understand other living things so

2303
01:35:26,810 --> 01:35:23,360
let's give it take another example

2304
01:35:30,050 --> 01:35:26,820
bacteria is it intelligent or is it not

2305
01:35:31,250 --> 01:35:30,060
well actually bacteria passes

2306
01:35:34,669 --> 01:35:31,260
information

2307
01:35:37,970 --> 01:35:34,679
across generations and to other species

2308
01:35:39,290 --> 01:35:37,980
of bacteria is it intelligent or not and

2309
01:35:41,169 --> 01:35:39,300
they're helping each other to survive

2310
01:35:43,669 --> 01:35:41,179
and in fact they will pass information

2311
01:35:46,970 --> 01:35:43,679
to the bacteria who considered their

2312
01:35:51,050 --> 01:35:46,980
enemy so this is talking cross species

2313
01:35:53,990 --> 01:35:51,060

right across the variety of bacteria and

2314
01:35:56,090 --> 01:35:54,000
a bigger Revelation was for me that we

2315
01:35:57,830 --> 01:35:56,100
are thinking that fungus right well I

2316
01:35:59,570 --> 01:35:57,840
don't know many people are aware but

2317
01:36:01,610 --> 01:35:59,580
fungus is considered to be the biggest

2318
01:36:03,050 --> 01:36:01,620
living organism

2319
01:36:05,149 --> 01:36:03,060
because it's connected you know

2320
01:36:07,250 --> 01:36:05,159
underground and overground and often

2321
01:36:08,870 --> 01:36:07,260
it's just one single organism for

2322
01:36:11,030 --> 01:36:08,880
several miles

2323
01:36:13,490 --> 01:36:11,040
could be extending under the floor the

2324
01:36:14,930 --> 01:36:13,500
one Forest land for you know and they're

2325
01:36:16,729 --> 01:36:14,940
all communicating so it's like this is

2326
01:36:18,890 --> 01:36:16,739
like an internet

2327
01:36:20,750 --> 01:36:18,900
but bacteria

2328
01:36:21,590 --> 01:36:20,760
if they're all communicating which they

2329
01:36:24,590 --> 01:36:21,600
do

2330
01:36:27,410 --> 01:36:24,600
they extend below the ground

2331
01:36:29,209 --> 01:36:27,420
and several miles up

2332
01:36:31,370 --> 01:36:29,219
so can you think that we're living in

2333
01:36:34,250 --> 01:36:31,380
the world of bacteria but not only that

2334
01:36:36,410 --> 01:36:34,260
there's a big part of our weight that is

2335
01:36:38,570 --> 01:36:36,420
pure bacteria

2336
01:36:40,850 --> 01:36:38,580
so we're breathing it in eating it in

2337
01:36:43,189 --> 01:36:40,860
touching it and we can't even see it's

2338
01:36:47,090 --> 01:36:43,199

coming in or going out

2339
01:36:49,970 --> 01:36:47,100
but yet it makes us do things bacteria

2340
01:36:52,330 --> 01:36:49,980
influences our human behavior and we're

2341
01:36:55,970 --> 01:36:52,340
thinking we're intelligent

2342
01:36:58,910 --> 01:36:55,980
I think humility is the way and empathy

2343
01:37:00,649 --> 01:36:58,920
is the way and to be a little bit more

2344
01:37:02,930 --> 01:37:00,659
respectful

2345
01:37:06,110 --> 01:37:02,940
of where we live and

2346
01:37:09,290 --> 01:37:06,120
what we're affected by is helpful for us

2347
01:37:11,390 --> 01:37:09,300
as species to navigate the world of

2348
01:37:13,129 --> 01:37:11,400
other species and see where the

2349
01:37:18,110 --> 01:37:13,139
intelligence

2350
01:37:20,030 --> 01:37:18,120
Define who is intelligent

2351
01:37:22,310 --> 01:37:20,040
ah wow

2352
01:37:23,990 --> 01:37:22,320
I'm so overwhelmed by all of this I um

2353
01:37:25,430 --> 01:37:24,000
well I know that we've taken up I've

2354
01:37:28,550 --> 01:37:25,440
already taken up a ton of your time so

2355
01:37:31,729 --> 01:37:28,560
I've just won a final question

2356
01:37:33,770 --> 01:37:31,739
I am so blown away by just the novelty

2357
01:37:36,410 --> 01:37:33,780
of the way that you approach your work

2358
01:37:38,930 --> 01:37:36,420
you aren't retreading Old Paths you're

2359
01:37:40,310 --> 01:37:38,940
forging new ones and by someone who

2360
01:37:42,229 --> 01:37:40,320
thinks of themselves as a pretty

2361
01:37:44,209 --> 01:37:42,239
independent thinker I'm humbled at the

2362
01:37:46,790 --> 01:37:44,219
way that you approach problem solving

2363
01:37:49,070 --> 01:37:46,800

and I would love to know if you really

2364
01:37:51,290 --> 01:37:49,080
want to be an innovator and really

2365
01:37:53,510 --> 01:37:51,300
change things in your field what do you

2366
01:37:56,270 --> 01:37:53,520
think it takes to do that

2367
01:37:59,030 --> 01:37:56,280
thank you Kelly I think it's important

2368
01:38:01,910 --> 01:37:59,040
to to ground yourself because I think

2369
01:38:03,890 --> 01:38:01,920
once it gets into our head we you know

2370
01:38:06,229 --> 01:38:03,900
like when I was talking about

2371
01:38:08,450 --> 01:38:06,239
experts who think they they know

2372
01:38:11,689 --> 01:38:08,460
everything so I think it's important to

2373
01:38:14,629 --> 01:38:11,699
remain in that space where what else I

2374
01:38:16,850 --> 01:38:14,639
don't know or what else could go wrong

2375
01:38:19,669 --> 01:38:16,860
and how can I better this space or

2376
01:38:22,250 --> 01:38:19,679
better myself is a good space to

2377
01:38:24,050 --> 01:38:22,260
to work from or what did I miss or what

2378
01:38:27,169 --> 01:38:24,060
did I not understood is the questions

2379
01:38:29,990 --> 01:38:27,179
that I'm interested so part of this

2380
01:38:31,790 --> 01:38:30,000
endeavor of Earth language and for

2381
01:38:32,930 --> 01:38:31,800
extending New Generation to be more

2382
01:38:35,090 --> 01:38:32,940
connected

2383
01:38:37,669 --> 01:38:35,100
I've also developed a training program

2384
01:38:40,430 --> 01:38:37,679
for training like it's probably more

2385
01:38:43,070 --> 01:38:40,440
awareness and curiosity program for new

2386
01:38:45,010 --> 01:38:43,080
parents they don't have to be that new

2387
01:38:48,169 --> 01:38:45,020
or that young

2388
01:38:50,450 --> 01:38:48,179

it's just anybody who has a newborn baby

2389
01:38:52,490 --> 01:38:50,460
around it could be grandparents it could

2390
01:38:54,410 --> 01:38:52,500
be very young or

2391
01:38:57,229 --> 01:38:54,420
professionals who finally decided to

2392
01:38:59,530 --> 01:38:57,239
have babies or aunties who don't have

2393
01:39:04,310 --> 01:38:59,540
babies and have access to one

2394
01:39:06,890 --> 01:39:04,320
and I feel that it is important to ask

2395
01:39:09,110 --> 01:39:06,900
to to remain curious and this is what

2396
01:39:12,470 --> 01:39:09,120
the program is about so I use all this

2397
01:39:13,729 --> 01:39:12,480
tools that I've developed and keep

2398
01:39:17,629 --> 01:39:13,739
developing

2399
01:39:19,790 --> 01:39:17,639
of making parents to be more

2400
01:39:21,770 --> 01:39:19,800
able to listen to themselves and to

2401
01:39:24,530 --> 01:39:21,780
their baby and to really learn to

2402
01:39:26,810 --> 01:39:24,540
communicate with the baby and learns

2403
01:39:29,090 --> 01:39:26,820
through their curiosity to see the world

2404
01:39:32,629 --> 01:39:29,100
through their eyes because it's a stage

2405
01:39:34,129 --> 01:39:32,639
in our life when we become different we

2406
01:39:35,629 --> 01:39:34,139
really do become different when we

2407
01:39:37,729 --> 01:39:35,639
become parents

2408
01:39:38,990 --> 01:39:37,739
suddenly world is upside down and we

2409
01:39:41,330 --> 01:39:39,000
can't well I don't know some people

2410
01:39:44,510 --> 01:39:41,340
probably natural at it but I'm not so

2411
01:39:45,950 --> 01:39:44,520
this was all very new and I did throw

2412
01:39:49,010 --> 01:39:45,960
everything upside down so I had to

2413
01:39:52,129 --> 01:39:49,020

reorient and be differently become a

2414
01:39:54,590 --> 01:39:52,139
different person change my way but more

2415
01:39:56,870 --> 01:39:54,600
importantly I was so lucky to recognize

2416
01:39:57,950 --> 01:39:56,880
that the children's have a lot to teach

2417
01:40:01,250 --> 01:39:57,960
us

2418
01:40:03,110 --> 01:40:01,260
and suddenly once I recognized that the

2419
01:40:05,689 --> 01:40:03,120
world became a different place

2420
01:40:07,970 --> 01:40:05,699
because there were so many Concepts that

2421
01:40:09,590 --> 01:40:07,980
I distilled in myself and thinking the

2422
01:40:13,070 --> 01:40:09,600
world works like this

2423
01:40:15,110 --> 01:40:13,080
and once I take my perspective through

2424
01:40:17,090 --> 01:40:15,120
just like I do professionally look

2425
01:40:19,669 --> 01:40:17,100
through other people's cognition and

2426
01:40:23,390 --> 01:40:19,679
thinking process once I started doing

2427
01:40:25,790 --> 01:40:23,400
that through babies I saw the world as a

2428
01:40:27,410 --> 01:40:25,800
completely different place and I think

2429
01:40:28,490 --> 01:40:27,420
that's important to change that

2430
01:40:32,390 --> 01:40:28,500
perspective

2431
01:40:35,629 --> 01:40:32,400
and to let the children remain curious

2432
01:40:37,790 --> 01:40:35,639
so I teach your parents and anybody

2433
01:40:42,770 --> 01:40:37,800
who's willing to listen and have a new

2434
01:40:44,930 --> 01:40:42,780
baby to observe to to just grow through

2435
01:40:48,709 --> 01:40:44,940
being around the baby

2436
01:40:51,350 --> 01:40:48,719
and help the baby to teach us on how to

2437
01:40:52,729 --> 01:40:51,360
navigate the world without disrupting it

2438
01:40:55,189 --> 01:40:52,739

because that's what

2439
01:40:57,649 --> 01:40:55,199
babies usually do that they're just so

2440
01:41:00,350 --> 01:40:57,659
curious that they follow their Instinct

2441
01:41:02,810 --> 01:41:00,360
and intuition and discover and look at

2442
01:41:05,330 --> 01:41:02,820
things not as we would

2443
01:41:07,910 --> 01:41:05,340
and that's what we need

2444
01:41:10,250 --> 01:41:07,920
Ah that's beautiful I love that

2445
01:41:12,290 --> 01:41:10,260
well thank you so much for your time

2446
01:41:14,410 --> 01:41:12,300
today I appreciate both of you so much

2447
01:41:16,550 --> 01:41:14,420
for being here this has been a really

2448
01:41:18,350 --> 01:41:16,560
inspiring and challenging conversation

2449
01:41:20,450 --> 01:41:18,360
that I'm sure I will be returning to

2450
01:41:21,590 --> 01:41:20,460
again and again thank you so much for

2451
01:41:23,750 --> 01:41:21,600
taking the time

2452
01:41:25,370 --> 01:41:23,760
thank you so much Diana for an

2453
01:41:29,390 --> 01:41:25,380
introduction

2454
01:41:31,310 --> 01:41:29,400
both to candy and also to this program I

2455
01:41:36,650 --> 01:41:31,320
much appreciate

2456
01:41:45,770 --> 01:41:40,000
[Music]