

1
00:00:08,580 --> 00:00:12,198
[Music]

2
00:00:17,199 --> 00:00:25,488
welcome to shattered reality with their

3
00:00:20,689 --> 00:00:28,250
hosts Kate Valentine and furs prepare to

4
00:00:25,489 --> 00:00:32,299
have your paradigms shifted and your

5
00:00:28,250 --> 00:00:37,880
truths questioned and now shattered

6
00:00:32,299 --> 00:00:40,009
reality another day another shattered

7
00:00:37,880 --> 00:00:41,089
reality and I know you're going to want

8
00:00:40,009 --> 00:00:44,599
to slate it

9
00:00:41,088 --> 00:00:47,179
yes I always love to slate that's my old

10
00:00:44,600 --> 00:00:51,230
commercial training from doing

11
00:00:47,179 --> 00:00:55,780
commercials and movies and TV stuff so

12
00:00:51,229 --> 00:01:00,578
what we have here today is December 5th

13
00:00:55,780 --> 00:01:05,569
2017 and this is believe it or not our

14
00:01:00,579 --> 00:01:07,430
59th show and we have a wonderful guest

15
00:01:05,569 --> 00:01:10,489
with us today

16
00:01:07,430 --> 00:01:16,130
somebody who has written a number of

17
00:01:10,489 --> 00:01:20,199
books who is a doctor of philosophy from

18
00:01:16,129 --> 00:01:23,719
Latrobe University she has a

19
00:01:20,200 --> 00:01:29,299
wide-ranging series of interests

20
00:01:23,719 --> 00:01:33,500
including spiders and other natural

21
00:01:29,299 --> 00:01:37,609
phenomena she's even written a book

22
00:01:33,500 --> 00:01:40,640
about a fictional book but we're having

23
00:01:37,609 --> 00:01:45,950
her on today to talk about her book

24
00:01:40,640 --> 00:01:50,750
primarily the memory code now I'm going

25
00:01:45,950 --> 00:01:56,469
to just summarize in one sentence before

26
00:01:50,750 --> 00:02:01,400
I introduce her I she speaks to the pre

27
00:01:56,469 --> 00:02:04,700
historic pre literary cultures that are

28
00:02:01,400 --> 00:02:08,599
have existed around the world some of

29

00:02:04,700 --> 00:02:12,550
which still exist and how they memorize

30
00:02:08,598 --> 00:02:16,848
all the information they need to know

31
00:02:12,550 --> 00:02:19,689
through something called song lines and

32
00:02:16,848 --> 00:02:24,099
then they

33
00:02:19,689 --> 00:02:27,310
then as time went by and people started

34
00:02:24,099 --> 00:02:32,740
to settle in one specific place rather

35
00:02:27,310 --> 00:02:35,759
than nomadically wander about these song

36
00:02:32,740 --> 00:02:39,580
lines were somewhat translated into

37
00:02:35,759 --> 00:02:42,009
monuments and personal devices that

38
00:02:39,580 --> 00:02:45,610
allowed them to remember now I'm sure

39
00:02:42,009 --> 00:02:49,319
all of this sounds very confusing but

40
00:02:45,610 --> 00:02:52,870
once we get into speaking to dr. Lynne

41
00:02:49,319 --> 00:02:56,500
Kelley here you will all understand this

42
00:02:52,870 --> 00:03:00,009
much better so if if you will let's

43
00:02:56,500 --> 00:03:03,819

welcome dr. Lynne Kelly welcome to the

44

00:03:00,009 --> 00:03:07,149

show dr. Kelley thanks Kate her delight

45

00:03:03,819 --> 00:03:09,549

it to be here yeah so how did you start

46

00:03:07,150 --> 00:03:12,370

this study it's sort of an obscure one

47

00:03:09,550 --> 00:03:14,740

but was it because you are in Australia

48

00:03:12,370 --> 00:03:18,250

because because they have original

49

00:03:14,740 --> 00:03:21,340

culture that certainly made a huge

50

00:03:18,250 --> 00:03:24,039

difference sort of kept stumbling onto

51

00:03:21,340 --> 00:03:26,319

things but I just want to explain about

52

00:03:24,039 --> 00:03:30,549

the Aboriginal culture are either

53

00:03:26,319 --> 00:03:34,259

settled or mobile not nomadic nomadic

54

00:03:30,550 --> 00:03:38,290

cultures are those that wander sort of

55

00:03:34,259 --> 00:03:41,079

randomly in some ways where has all

56

00:03:38,289 --> 00:03:44,459

cultures are ones that will move between

57

00:03:41,080 --> 00:03:46,870

a number of different locations over the

58
00:03:44,459 --> 00:03:48,640
celebrations and so on but they know

59
00:03:46,870 --> 00:03:51,239
perfectly well where they're going

60
00:03:48,639 --> 00:03:54,879
they're well worn tracks and those

61
00:03:51,239 --> 00:03:56,920
tracks are recorded in memory they know

62
00:03:54,879 --> 00:03:59,590
them very well mentally as well as

63
00:03:56,919 --> 00:04:01,299
physically and in Australia that song

64
00:03:59,590 --> 00:04:03,969
lines in America they're Native

65
00:04:01,300 --> 00:04:06,550
pilgrimage trails in the Pacific their

66
00:04:03,969 --> 00:04:09,099
ceremonial roads so this is the

67
00:04:06,550 --> 00:04:11,410
well-known phenomenal globally but

68
00:04:09,099 --> 00:04:15,400
Australian Aboriginal cultures of which

69
00:04:11,409 --> 00:04:19,509
there's about 300 at least are the best

70
00:04:15,400 --> 00:04:22,360
example we can get I have to tell you

71
00:04:19,509 --> 00:04:27,219
something I have to make a confession if

72
00:04:22,360 --> 00:04:30,879
you will the confession is this I have a

73
00:04:27,220 --> 00:04:32,670
little bit of a packrat I have much more

74
00:04:30,879 --> 00:04:36,509
stuff than I ought to have

75
00:04:32,670 --> 00:04:40,009
according to today's idea of living

76
00:04:36,509 --> 00:04:43,560
minimally I wouldn't say I'm a

77
00:04:40,009 --> 00:04:46,800
psychiatric case about it but what I

78
00:04:43,560 --> 00:04:49,589
found is that I keep some of the things

79
00:04:46,800 --> 00:04:53,400
that I keep because when I pick the the

80
00:04:49,589 --> 00:04:56,669
object up it reminds me of something in

81
00:04:53,399 --> 00:05:00,000
my life that I might never think about

82
00:04:56,670 --> 00:05:02,460
again if I didn't have the object and so

83
00:05:00,000 --> 00:05:05,279
the object even though it might not be

84
00:05:02,459 --> 00:05:08,099
worth anything it could be lets say a

85
00:05:05,279 --> 00:05:12,449
playbill from a play I've attended on

86

00:05:08,100 --> 00:05:15,300
Broadway or an empty perfume bottle that

87
00:05:12,449 --> 00:05:18,689
was given to me by an ex suitor when I

88
00:05:15,300 --> 00:05:21,689
was a teenager and I picked these things

89
00:05:18,689 --> 00:05:26,639
up and this very rich context comes into

90
00:05:21,689 --> 00:05:28,769
mind is this something I felt like it

91
00:05:26,639 --> 00:05:30,629
was related to what it is that you're

92
00:05:28,769 --> 00:05:33,870
speaking of and it's part of the reason

93
00:05:30,629 --> 00:05:35,850
that made me absolutely certain that I

94
00:05:33,870 --> 00:05:39,329
wanted to have you here on shadowed

95
00:05:35,850 --> 00:05:41,310
reality thank you that's really

96
00:05:39,329 --> 00:05:46,639
interesting because there's a difference

97
00:05:41,310 --> 00:05:49,319
between reminders and memory devices so

98
00:05:46,639 --> 00:05:52,500
reminders are a form of that in that

99
00:05:49,319 --> 00:05:55,319
they are making your memory go back but

100
00:05:52,500 --> 00:05:59,370

indigenous cultures can't carry lots of

101

00:05:55,319 --> 00:06:03,180

stuff and so they build formal methods

102

00:05:59,370 --> 00:06:06,540

into what they do carry if we go to the

103

00:06:03,180 --> 00:06:08,819

absolute minimal stage of one of the

104

00:06:06,540 --> 00:06:11,040

northern Australian central desert

105

00:06:08,819 --> 00:06:13,949

northern Australia Aboriginal cultures

106

00:06:11,040 --> 00:06:17,060

they will carry with them what's called

107

00:06:13,949 --> 00:06:20,310

a Coulomb on and this is a carved wooden

108

00:06:17,060 --> 00:06:23,310

dish that is used to carry food it's

109

00:06:20,310 --> 00:06:25,829

sort of curved carried food carry babies

110

00:06:23,310 --> 00:06:28,800

carry just about anything but on the

111

00:06:25,829 --> 00:06:31,349

reverse of it there will be designs and

112

00:06:28,800 --> 00:06:34,079

those designs act as the sort of memory

113

00:06:31,350 --> 00:06:36,900

device you're talking about but every

114

00:06:34,079 --> 00:06:39,300

single aspect of it as they touch them

115
00:06:36,899 --> 00:06:42,539
will remind them of a song or a story

116
00:06:39,300 --> 00:06:44,040
that encodes the whole culture so there

117
00:06:42,540 --> 00:06:46,080
will be the sort of things you're

118
00:06:44,040 --> 00:06:48,289
talking about but also

119
00:06:46,079 --> 00:06:51,000
all the knowledge of the culture and

120
00:06:48,288 --> 00:06:52,769
that's about all they'll carry with them

121
00:06:51,000 --> 00:06:57,389
apart from digging sticks and a few

122
00:06:52,769 --> 00:07:00,918
other odds and ends and children so they

123
00:06:57,389 --> 00:07:04,199
have to go absolute minimalist and

124
00:07:00,918 --> 00:07:07,049
maintain this encyclopedia based on a

125
00:07:04,199 --> 00:07:08,939
few devices they'll also use artwork and

126
00:07:07,050 --> 00:07:12,030
other devices as well

127
00:07:08,939 --> 00:07:14,610
and you have a photo of this Kulemin in

128
00:07:12,029 --> 00:07:17,250
your book it's I think it's two photos

129
00:07:14,610 --> 00:07:20,968
of different aspects of the same cool

130
00:07:17,250 --> 00:07:24,360
amount yes that's right and other

131
00:07:20,968 --> 00:07:27,598
cultures have other versions but all of

132
00:07:24,360 --> 00:07:31,139
them use some kind of portable devices

133
00:07:27,598 --> 00:07:34,259
which allow them to memorize and sing

134
00:07:31,139 --> 00:07:37,019
all the songs that encode vast amounts

135
00:07:34,259 --> 00:07:41,430
of information a lot of it pragmatic and

136
00:07:37,019 --> 00:07:44,339
scientific which is my area of expertise

137
00:07:41,430 --> 00:07:45,478
but of course the spiritual and belief

138
00:07:44,339 --> 00:07:48,750
side of it

139
00:07:45,478 --> 00:07:51,689
- but that's theory in which we work the

140
00:07:48,750 --> 00:07:53,430
most the area I've looked at to

141
00:07:51,689 --> 00:07:56,129
understand the system of the things

142
00:07:53,430 --> 00:07:58,560
where we agree so kangaroo in Australia

143

00:07:56,129 --> 00:08:01,050
goes blank EDD Boinga Dede whether you

144
00:07:58,560 --> 00:08:02,668
encode that information in writing which

145
00:08:01,050 --> 00:08:03,509
is a bit hard because I can't spell

146
00:08:02,668 --> 00:08:06,959
Boyka Dede

147
00:08:03,509 --> 00:08:09,028
but or in terms of the stories and the

148
00:08:06,959 --> 00:08:15,778
dances that tell the behavior of a

149
00:08:09,028 --> 00:08:19,408
kangaroo well so this wall started for

150
00:08:15,778 --> 00:08:22,168
you with these song lines do you want to

151
00:08:19,408 --> 00:08:26,990
tell us what it means actly for our

152
00:08:22,168 --> 00:08:26,990
listeners what song lines really means

153
00:08:29,360 --> 00:08:37,379
but it started for me before that I was

154
00:08:33,538 --> 00:08:40,559
looking into behavior one thing I write

155
00:08:37,379 --> 00:08:42,958
about animal behavior and I was looking

156
00:08:40,559 --> 00:08:45,809
at wondering whether writing about

157
00:08:42,958 --> 00:08:48,689

Aboriginal stories or Native American

158

00:08:45,809 --> 00:08:52,469

stories would make me see the behavior

159

00:08:48,690 --> 00:08:54,720

of an animal more more different more

160

00:08:52,470 --> 00:08:57,269

differently more thoroughly which of

161

00:08:54,720 --> 00:08:58,149

course it did but as I started doing

162

00:08:57,269 --> 00:09:00,669

that

163

00:08:58,149 --> 00:09:03,100

I started realizing the vast amount of

164

00:09:00,669 --> 00:09:05,349

information they're actually storing so

165

00:09:03,100 --> 00:09:08,129

the Navajo for example there's one study

166

00:09:05,350 --> 00:09:10,720

that shows that they have recorded the

167

00:09:08,129 --> 00:09:14,559

identification of behavior and habitat

168

00:09:10,720 --> 00:09:17,019

and so on of over 700 insects and that's

169

00:09:14,559 --> 00:09:19,959

just insects adding all the other

170

00:09:17,019 --> 00:09:21,759

animals and you're up to a thousand then

171

00:09:19,960 --> 00:09:24,460

adding the plants and navigation it's

172
00:09:21,759 --> 00:09:27,129
turned out to be this vast amount of

173
00:09:24,460 --> 00:09:29,470
information and I couldn't memorize

174
00:09:27,129 --> 00:09:32,320
anything so I started asking how on

175
00:09:29,470 --> 00:09:35,110
earth do they do this and that led me to

176
00:09:32,320 --> 00:09:38,530
song lines now some lines for Australian

177
00:09:35,110 --> 00:09:41,950
Aboriginal people are basically tracks

178
00:09:38,529 --> 00:09:44,259
through the bush location to location so

179
00:09:41,950 --> 00:09:48,340
that they can navigate where at each

180
00:09:44,259 --> 00:09:52,000
location they will perform a ritual now

181
00:09:48,340 --> 00:09:54,879
ritual technically is just a repeated

182
00:09:52,000 --> 00:09:56,799
event it may have a spiritual domain it

183
00:09:54,879 --> 00:09:59,559
may not but it's repeated because

184
00:09:56,799 --> 00:10:01,599
repetition helps you memorize so to each

185
00:09:59,559 --> 00:10:03,099
location they would sing a song or

186
00:10:01,600 --> 00:10:05,830
perform a dance which might be the

187
00:10:03,100 --> 00:10:08,710
behavior of the kangaroo it might be

188
00:10:05,830 --> 00:10:10,660
about how to nap stone where to find a

189
00:10:08,710 --> 00:10:14,710
waterhole because Australia's

190
00:10:10,659 --> 00:10:17,230
desperately short of water and Sun and

191
00:10:14,710 --> 00:10:19,840
all this information would be stored in

192
00:10:17,230 --> 00:10:22,029
these songs that were performed and

193
00:10:19,840 --> 00:10:26,350
songs more memorable than just words

194
00:10:22,029 --> 00:10:28,360
that's why it's so often sung location

195
00:10:26,350 --> 00:10:30,730
by location right across the landscape

196
00:10:28,360 --> 00:10:33,460
which acts as the sort of memory you

197
00:10:30,730 --> 00:10:36,100
were talking about a reminder to sing

198
00:10:33,460 --> 00:10:38,410
that song and what the song is now we

199
00:10:36,100 --> 00:10:41,139
know from the Y annual people right up

200

00:10:38,409 --> 00:10:44,679
north of Australia that they recorded at

201
00:10:41,139 --> 00:10:47,080
least sick at least 800 kilometers I'm

202
00:10:44,679 --> 00:10:50,739
sorry I can't do that miles but eight

203
00:10:47,080 --> 00:10:55,540
it's a long way 800 kilometers of these

204
00:10:50,740 --> 00:10:57,909
song lines with these songs at every few

205
00:10:55,539 --> 00:11:01,509
meters every hundred meters at the most

206
00:10:57,909 --> 00:11:05,289
right along them wow you talk vast

207
00:11:01,509 --> 00:11:11,200
number of songs but that act there's a

208
00:11:05,289 --> 00:11:11,949
wonderful memory system it's the same as

209
00:11:11,200 --> 00:11:15,400
the ancient

210
00:11:11,950 --> 00:11:18,460
Greeks and Romans used called the method

211
00:11:15,399 --> 00:11:21,009
of loci loc I or the art of memory or

212
00:11:18,460 --> 00:11:24,070
memory palaces but just in a more

213
00:11:21,009 --> 00:11:26,110
complex form but then I was able to show

214
00:11:24,070 --> 00:11:29,770

that Native American pilgrimage trails

215

00:11:26,110 --> 00:11:32,080

work the same the incas sect ways see qu

216

00:11:29,769 --> 00:11:33,789

es I'm not sure the pronunciation

217

00:11:32,080 --> 00:11:38,050

different people tell me different

218

00:11:33,789 --> 00:11:40,480

pronunciations the Pacific ceremonial

219

00:11:38,049 --> 00:11:44,289

ropes so it's a universal method because

220

00:11:40,480 --> 00:11:46,779

that's the way the human brain works and

221

00:11:44,289 --> 00:11:49,240

it's phenomenally powerful very

222

00:11:46,779 --> 00:11:53,829

interesting very interesting for sure I

223

00:11:49,240 --> 00:11:57,070

know that ritual is very important to

224

00:11:53,830 --> 00:12:00,850

train the mind because I work sometimes

225

00:11:57,070 --> 00:12:04,120

with people with intentionality like

226

00:12:00,850 --> 00:12:07,840

intending for their success in some way

227

00:12:04,120 --> 00:12:10,149

intending let's say to get a PhD which

228

00:12:07,840 --> 00:12:13,780

would work in your case you have a PhD

229
00:12:10,149 --> 00:12:15,759
that somebody who wants some attainment

230
00:12:13,779 --> 00:12:20,049
to this moment we're going to just use

231
00:12:15,759 --> 00:12:23,230
PhD and I I sort of instruct them that

232
00:12:20,049 --> 00:12:26,919
they need to create a ritual around it

233
00:12:23,230 --> 00:12:29,529
to focus their intention ality so you

234
00:12:26,919 --> 00:12:35,889
know I'm very familiar with the use of

235
00:12:29,529 --> 00:12:38,139
ritual and absolutely yeah I've got lots

236
00:12:35,889 --> 00:12:40,929
of examples of that because it does

237
00:12:38,139 --> 00:12:42,819
focus you I just trained for the

238
00:12:40,929 --> 00:12:45,159
Australian memory championships where

239
00:12:42,820 --> 00:12:47,320
you memorize shuttle decks of cards and

240
00:12:45,159 --> 00:12:52,120
all these terrible things but you're

241
00:12:47,320 --> 00:12:56,350
getting use memory palaces and I put on

242
00:12:52,120 --> 00:12:59,470
earphones to concentrate I don't know

243
00:12:56,350 --> 00:13:01,930
how much they cut out the world but the

244
00:12:59,470 --> 00:13:04,360
moment I put them on I was that's this

245
00:13:01,929 --> 00:13:06,219
is the task I'm working out before I

246
00:13:04,360 --> 00:13:10,300
ride I always write something in a

247
00:13:06,220 --> 00:13:12,519
journal it start that ritual focuses you

248
00:13:10,299 --> 00:13:17,859
I think that what you're onto is very

249
00:13:12,519 --> 00:13:24,149
important why thank you so we've got the

250
00:13:17,860 --> 00:13:25,879
song lines and then we move from the

251
00:13:24,149 --> 00:13:29,629
aboriginal culture

252
00:13:25,879 --> 00:13:33,620
into the cultures that are beginning to

253
00:13:29,629 --> 00:13:38,179
settle settle down and I believe that

254
00:13:33,620 --> 00:13:41,539
you made your first discovery in regards

255
00:13:38,179 --> 00:13:46,009
to this in in Avebury or Stonehenge

256
00:13:41,539 --> 00:13:46,819
which was it and could you explain right

257

00:13:46,009 --> 00:13:49,069

yes

258

00:13:46,820 --> 00:13:51,350

I was totally immersed in these memory

259

00:13:49,070 --> 00:13:54,379

palaces and memory methods and my

260

00:13:51,350 --> 00:13:56,389

husband just reeked walla fide as just

261

00:13:54,379 --> 00:13:58,939

qualified as an archeologist and he want

262

00:13:56,389 --> 00:14:00,679

to go to Stonehenge in England and so I

263

00:13:58,940 --> 00:14:03,410

trotted along with him having no

264

00:14:00,679 --> 00:14:06,829

knowledge and no interest particularly

265

00:14:03,409 --> 00:14:10,250

in archaeology and there we are on

266

00:14:06,830 --> 00:14:13,610

Salisbury Plain stone circle in front of

267

00:14:10,250 --> 00:14:16,009

us and I thought this is very clever

268

00:14:13,610 --> 00:14:18,379

what they've done is when they need to

269

00:14:16,009 --> 00:14:21,860

settle they need to make these song

270

00:14:18,379 --> 00:14:24,679

lines local they can't afford to lose

271

00:14:21,860 --> 00:14:28,610

those locations and the reminders of the

272

00:14:24,679 --> 00:14:31,669

memory aids to all that information so

273

00:14:28,610 --> 00:14:33,289

what they've done is put up a stone in a

274

00:14:31,669 --> 00:14:35,089

big circle because originally it didn't

275

00:14:33,289 --> 00:14:37,009

have the big stone henge didn't have the

276

00:14:35,090 --> 00:14:39,530

big ones in the middle for the first 500

277

00:14:37,009 --> 00:14:43,129

years it was a stone circle about a

278

00:14:39,529 --> 00:14:46,039

hundred metres across with 56 blue

279

00:14:43,129 --> 00:14:48,649

stones in it that's representing the

280

00:14:46,039 --> 00:14:50,899

annual cycle of the locations and the

281

00:14:48,649 --> 00:14:53,169

songs that was just the idea and I

282

00:14:50,899 --> 00:14:56,419

discovered that nobody had ever

283

00:14:53,169 --> 00:14:58,909

suggested that before and therefore my

284

00:14:56,419 --> 00:15:00,500

original assumption was okay somebody

285

00:14:58,909 --> 00:15:03,049

has and they've shown that it's rubbish

286
00:15:00,500 --> 00:15:06,289
but I couldn't get rid of it there's a

287
00:15:03,049 --> 00:15:08,629
thousand stone circles like that of

288
00:15:06,289 --> 00:15:10,490
various size and that all over Britain

289
00:15:08,629 --> 00:15:14,090
and Western Europe but then if you go to

290
00:15:10,490 --> 00:15:16,430
America you've got timber circles in

291
00:15:14,090 --> 00:15:18,500
Louisiana and Poverty Point they had

292
00:15:16,429 --> 00:15:21,579
timber circles similar dimensions

293
00:15:18,500 --> 00:15:24,039
similar numbers you've got a whole lot

294
00:15:21,580 --> 00:15:28,250
over in Ohio

295
00:15:24,039 --> 00:15:30,709
yes Ohio wonderful stuff and then

296
00:15:28,250 --> 00:15:32,870
there's more in Egypt so you've got this

297
00:15:30,710 --> 00:15:36,259
same pattern everywhere where there's

298
00:15:32,870 --> 00:15:38,360
not contact between the cultures the

299
00:15:36,259 --> 00:15:39,379
common factor is that's the way the

300
00:15:38,360 --> 00:15:42,318
human brain

301
00:15:39,379 --> 00:15:45,979
these memory palaces just work in the

302
00:15:42,318 --> 00:15:51,469
neuroscience of associating memory with

303
00:15:45,979 --> 00:15:53,899
place is very strong and so being part

304
00:15:51,470 --> 00:15:56,859
of the research at the moment but won

305
00:15:53,899 --> 00:15:59,298
the Nobel Prize for medicine 2014

306
00:15:56,859 --> 00:16:01,519
studies on this sort of thing so you've

307
00:15:59,298 --> 00:16:03,918
got the human brain as the common factor

308
00:16:01,519 --> 00:16:06,918
setting up these memory palaces

309
00:16:03,918 --> 00:16:10,578
everywhere so tell us more about memory

310
00:16:06,918 --> 00:16:13,489
palaces so memory palace is just a set

311
00:16:10,578 --> 00:16:16,068
of locations if you'd want to set up one

312
00:16:13,489 --> 00:16:18,889
at home and say you wanted to remember

313
00:16:16,068 --> 00:16:20,748
the presidents the United States which I

314

00:16:18,889 --> 00:16:22,938
can't do except don't know them but

315
00:16:20,749 --> 00:16:24,699
would use that as an example you would

316
00:16:22,938 --> 00:16:27,738
put the first president

317
00:16:24,698 --> 00:16:29,269
imagine him somehow in the location of

318
00:16:27,739 --> 00:16:31,369
the front door

319
00:16:29,269 --> 00:16:34,220
you'd move to the second location and

320
00:16:31,369 --> 00:16:36,470
place the second president there and so

321
00:16:34,220 --> 00:16:38,449
on right through all your presidents so

322
00:16:36,470 --> 00:16:40,538
that as you moved around that memory

323
00:16:38,448 --> 00:16:43,428
palace physically or just in your mind

324
00:16:40,538 --> 00:16:45,318
you would get each of them in order and

325
00:16:43,428 --> 00:16:47,899
the difference between that in a

326
00:16:45,318 --> 00:16:51,108
mnemonic rhyme is that you can add more

327
00:16:47,899 --> 00:16:53,058
and more more data to every one of those

328
00:16:51,109 --> 00:16:55,189

locations and make it more and more

329

00:16:53,058 --> 00:16:58,698

complex and that's what indigenous

330

00:16:55,188 --> 00:17:00,558

cultures do at each location they will

331

00:16:58,698 --> 00:17:02,538

teach the stories that we hear the

332

00:17:00,558 --> 00:17:05,240

children's stories because we're not

333

00:17:02,538 --> 00:17:06,949

initiated and then with initiation they

334

00:17:05,240 --> 00:17:10,189

will add more and more and more

335

00:17:06,949 --> 00:17:12,439

complexity so the concept of a memory

336

00:17:10,189 --> 00:17:15,169

palace is the most powerful memory

337

00:17:12,439 --> 00:17:17,329

method all come all memory champions use

338

00:17:15,169 --> 00:17:21,589

it today in the memory championships in

339

00:17:17,328 --> 00:17:24,948

fact yes no two days ago Alex Mullen an

340

00:17:21,588 --> 00:17:27,318

American just took out the world memory

341

00:17:24,949 --> 00:17:29,929

championship using a memory palace and

342

00:17:27,318 --> 00:17:34,428

memorized one of the events he memorized

343
00:17:29,929 --> 00:17:37,909
a shuffled deck of cards in 15.6 seconds

344
00:17:34,429 --> 00:17:40,639
mylord is astounding and a new world

345
00:17:37,909 --> 00:17:43,460
record I could do it in eight minutes

346
00:17:40,638 --> 00:17:47,148
and I'm pretty pleased with that that's

347
00:17:43,460 --> 00:17:49,548
amazing in itself I will do is create

348
00:17:47,148 --> 00:17:52,219
images and place them in the locations

349
00:17:49,548 --> 00:17:53,180
in a memory palace well I find this

350
00:17:52,220 --> 00:17:55,460
extremely

351
00:17:53,180 --> 00:18:00,460
interesting because I've traveled around

352
00:17:55,460 --> 00:18:03,769
the world going to megalithic places and

353
00:18:00,460 --> 00:18:07,069
quite frankly it never occurred to me

354
00:18:03,769 --> 00:18:09,470
that this was the primary reason for

355
00:18:07,069 --> 00:18:12,079
some of these things have you been to

356
00:18:09,470 --> 00:18:15,289
Newgrange I know you show a picture of

357
00:18:12,079 --> 00:18:18,019
it could you tell us about how you found

358
00:18:15,289 --> 00:18:22,159
Newgrange and and what you thought about

359
00:18:18,019 --> 00:18:25,250
that yes this is the there's a whole lot

360
00:18:22,160 --> 00:18:29,720
more aspects to arguing that these

361
00:18:25,250 --> 00:18:32,089
locations are memory palaces or memories

362
00:18:29,720 --> 00:18:34,910
spaces knowledge spaces because if I

363
00:18:32,089 --> 00:18:38,209
just argued what I've said so far it's

364
00:18:34,910 --> 00:18:39,950
no any complex enough and so what

365
00:18:38,210 --> 00:18:42,380
so there's actually 10 aspects but

366
00:18:39,950 --> 00:18:44,509
another really critical one is that

367
00:18:42,380 --> 00:18:48,770
indigenous cultures use restricted

368
00:18:44,509 --> 00:18:50,930
information yes ASIS stop they they

369
00:18:48,769 --> 00:18:52,879
really important stuff that they can't

370
00:18:50,930 --> 00:18:55,310
get wrong it's held at a very high level

371

00:18:52,880 --> 00:18:57,740
of initiation very secret because that

372
00:18:55,309 --> 00:19:00,919
stops the Chinese whispers effect it

373
00:18:57,740 --> 00:19:03,230
stops corruption of the information by

374
00:19:00,920 --> 00:19:05,690
everybody chattering about it and keeps

375
00:19:03,230 --> 00:19:07,069
it very accurate and we have exempt I

376
00:19:05,690 --> 00:19:09,200
will get back to Newgrange this is

377
00:19:07,069 --> 00:19:12,799
really important than your page okay but

378
00:19:09,200 --> 00:19:14,120
we do have stories in Australia now

379
00:19:12,799 --> 00:19:15,919
research showing that some of the

380
00:19:14,119 --> 00:19:18,769
stories on the landscape changes date

381
00:19:15,920 --> 00:19:19,430
back seven to ten thousand years if not

382
00:19:18,769 --> 00:19:22,039
longer

383
00:19:19,430 --> 00:19:24,620
and that's how robust these methods are

384
00:19:22,039 --> 00:19:27,980
as long as it's kept accurate so

385
00:19:24,619 --> 00:19:31,759

Newgrange and right round the world you

386

00:19:27,980 --> 00:19:34,549

find restricted places so those I'm

387

00:19:31,759 --> 00:19:37,970

saying that what's called tombs and cans

388

00:19:34,549 --> 00:19:40,669

and so on would have included bones

389

00:19:37,970 --> 00:19:42,380

because they don't include many in fact

390

00:19:40,670 --> 00:19:44,750

at Newgrange they have very little

391

00:19:42,380 --> 00:19:48,560

evidence of it but they still call the

392

00:19:44,750 --> 00:19:50,420

tomb of these secret passages which

393

00:19:48,559 --> 00:19:52,339

would have been restricted performance

394

00:19:50,420 --> 00:19:53,000

spaces the acoustics in them are

395

00:19:52,339 --> 00:19:54,949

stunning

396

00:19:53,000 --> 00:19:57,769

there's the artwork that would act as a

397

00:19:54,950 --> 00:19:59,809

memory device but also only those

398

00:19:57,769 --> 00:20:02,180

initiated would have been allowed in

399

00:19:59,809 --> 00:20:04,639

there in order to ensure that this

400
00:20:02,180 --> 00:20:06,750
information was kept accurate but at

401
00:20:04,640 --> 00:20:09,840
Newgrange you've also got a circle of

402
00:20:06,750 --> 00:20:12,150
around it of standing stones you've also

403
00:20:09,839 --> 00:20:14,549
got the stones right around the

404
00:20:12,150 --> 00:20:18,780
perimeter on the outside which had

405
00:20:14,549 --> 00:20:21,509
decorated yes they are that act as each

406
00:20:18,779 --> 00:20:23,910
one quite different those would act as a

407
00:20:21,509 --> 00:20:26,309
set of memory locations as would the

408
00:20:23,910 --> 00:20:28,410
circle of stones around it and then the

409
00:20:26,309 --> 00:20:31,500
highly restricted information would have

410
00:20:28,410 --> 00:20:35,600
been kept in the restricted locations

411
00:20:31,500 --> 00:20:40,200
just as the Native American sites have

412
00:20:35,599 --> 00:20:41,669
their locations they have lodges and it

413
00:20:40,200 --> 00:20:41,970
depends which culture you're talking

414
00:20:41,670 --> 00:20:44,820
about

415
00:20:41,970 --> 00:20:47,730
but restricted areas and initiation into

416
00:20:44,819 --> 00:20:49,589
that information so new grains you have

417
00:20:47,730 --> 00:20:52,200
the restricted and the public knowledge

418
00:20:49,589 --> 00:20:56,689
you have performance spaces outside and

419
00:20:52,200 --> 00:20:59,069
inside acoustic enhancement astronomical

420
00:20:56,690 --> 00:21:02,970
alignments because that enables you to

421
00:20:59,069 --> 00:21:05,189
maintain a calendar which is absolutely

422
00:21:02,970 --> 00:21:07,559
essential for ceremony as well as for

423
00:21:05,190 --> 00:21:11,279
agriculture and hunting and resource

424
00:21:07,559 --> 00:21:13,139
management and I learnt most about that

425
00:21:11,279 --> 00:21:14,789
I Australian Aboriginal people are

426
00:21:13,140 --> 00:21:18,000
really good on this astronomical

427
00:21:14,789 --> 00:21:20,339
alignment but your Pueblo people are

428

00:21:18,000 --> 00:21:24,509
absolutely extraordinary in the level of

429
00:21:20,339 --> 00:21:27,929
astronomy their knowledge and the way

430
00:21:24,509 --> 00:21:32,839
they maintained corn through mythology

431
00:21:27,930 --> 00:21:36,420
through story but also really clever

432
00:21:32,839 --> 00:21:40,199
clever planting of corn of multiple

433
00:21:36,420 --> 00:21:44,670
species varieties colors so that they

434
00:21:40,200 --> 00:21:46,529
didn't in to cross pollinate they kept

435
00:21:44,670 --> 00:21:48,330
them pure for hundreds of years which

436
00:21:46,529 --> 00:21:50,730
enabled them to survive in harsh

437
00:21:48,329 --> 00:21:53,429
conditions so all this sort of

438
00:21:50,730 --> 00:21:56,660
information has to be held and it has to

439
00:21:53,430 --> 00:21:59,670
be held accurately yeah it is quite

440
00:21:56,660 --> 00:22:04,350
fascinating having been down to the

441
00:21:59,670 --> 00:22:06,900
Chaco Canyon area and having traveled

442
00:22:04,349 --> 00:22:09,649

around through there I know that you

443

00:22:06,900 --> 00:22:12,200

don't put a lot of emphasis on the

444

00:22:09,650 --> 00:22:15,500

spirituality of this situation but I

445

00:22:12,200 --> 00:22:18,569

found it in many cases to be

446

00:22:15,500 --> 00:22:19,769

overwhelming myself at Newgrange and in

447

00:22:18,569 --> 00:22:22,889

Chaco Canyon

448

00:22:19,769 --> 00:22:25,440

at various other sites as I said I'd

449

00:22:22,890 --> 00:22:27,900

have gone around the world unfortunately

450

00:22:25,440 --> 00:22:30,420

have not yet made it to Australia or

451

00:22:27,900 --> 00:22:33,060

Easter Island but they're on my list

452

00:22:30,420 --> 00:22:39,000

they're on my my list to go to these

453

00:22:33,059 --> 00:22:42,089

places as well so yeah I I find this

454

00:22:39,000 --> 00:22:46,710

very very fascinating and I'm wondering

455

00:22:42,089 --> 00:22:50,549

if you have interacted at all with the

456

00:22:46,710 --> 00:22:53,730

acoustic people out there because of the

457
00:22:50,549 --> 00:22:56,819
last four or five years in doing my own

458
00:22:53,730 --> 00:23:02,309
research both foreshadowed reality and

459
00:22:56,819 --> 00:23:07,379
my blog I I found that there's a lot of

460
00:23:02,309 --> 00:23:10,319
new research on the quality of acoustics

461
00:23:07,380 --> 00:23:16,260
that can be found in some of these

462
00:23:10,319 --> 00:23:19,710
Cairns and megalithic sites absolutely

463
00:23:16,259 --> 00:23:23,309
the acoustics is one of the major signs

464
00:23:19,710 --> 00:23:25,890
because acoustic enhancement makes stuff

465
00:23:23,309 --> 00:23:28,259
more memorable I don't go into the

466
00:23:25,890 --> 00:23:30,780
spiritual side because I don't have any

467
00:23:28,259 --> 00:23:33,029
expertise in that area I acknowledge

468
00:23:30,779 --> 00:23:35,940
it's important I did come from a

469
00:23:33,029 --> 00:23:40,339
hardcore skeptical scientific background

470
00:23:35,940 --> 00:23:44,519
but I acknowledged that at Chaco Canyon

471
00:23:40,339 --> 00:23:47,159
the impact on me emotionally was

472
00:23:44,519 --> 00:23:50,940
something I hadn't predicted and didn't

473
00:23:47,160 --> 00:23:53,450
expect and can't explain and at the

474
00:23:50,940 --> 00:23:57,240
petroglyph National Monument near

475
00:23:53,450 --> 00:23:59,850
Albuquerque I have to say option so I'm

476
00:23:57,240 --> 00:24:02,940
not denying those sides I just don't

477
00:23:59,849 --> 00:24:06,119
have the expertise to talk about them

478
00:24:02,940 --> 00:24:09,330
but the acoustics is absolutely critical

479
00:24:06,119 --> 00:24:11,699
and that's one of the things that if you

480
00:24:09,329 --> 00:24:14,039
look at the megalithic sites in

481
00:24:11,700 --> 00:24:19,980
particular in the chalk where they could

482
00:24:14,039 --> 00:24:22,409
cut these great big deep ditches around

483
00:24:19,980 --> 00:24:24,509
the hinges so we're talking Stonehenge

484
00:24:22,410 --> 00:24:27,690
where the ditch was about two meters

485

00:24:24,509 --> 00:24:30,990
deep at times but Avery and directin

486
00:24:27,690 --> 00:24:33,298
walls the much bigger hinges the ditches

487
00:24:30,990 --> 00:24:37,769
were up to ten meters deep

488
00:24:33,298 --> 00:24:40,648
cutting orc going for a kilometer now if

489
00:24:37,769 --> 00:24:44,548
you can visualize yourself in a choc

490
00:24:40,648 --> 00:24:47,729
white stone ditch 10 meters deep with

491
00:24:44,548 --> 00:24:50,460
flat bottoms they're not defensive ah

492
00:24:47,730 --> 00:24:53,460
the acoustics in there must have been

493
00:24:50,460 --> 00:24:55,409
extraordinary they were performing in

494
00:24:53,460 --> 00:24:57,119
the ditches that's why they put so much

495
00:24:55,409 --> 00:24:59,460
effort to it you're talking million

496
00:24:57,118 --> 00:25:02,220
workers they didn't do this for no

497
00:24:59,460 --> 00:25:06,210
reason or just to show off they did it

498
00:25:02,220 --> 00:25:08,100
because but the weather in England it's

499
00:25:06,210 --> 00:25:12,269

terrible so they must perform the

500

00:25:08,099 --> 00:25:14,219

ceremonies and so they did a ditch deep

501

00:25:12,269 --> 00:25:15,989

enough to perform in to protect

502

00:25:14,220 --> 00:25:19,858

themselves the weather all year round

503

00:25:15,989 --> 00:25:21,659

and but they will have found that the

504

00:25:19,858 --> 00:25:23,999

acoustics would be extraordinary it's

505

00:25:21,659 --> 00:25:25,739

like you're singing in the shower gone

506

00:25:23,999 --> 00:25:28,470

to umpteen extremes because stone

507

00:25:25,739 --> 00:25:29,940

reverberates and reflects and you'll get

508

00:25:28,470 --> 00:25:31,739

interference patterns all sorts of

509

00:25:29,940 --> 00:25:36,179

things the same as they're finding in

510

00:25:31,739 --> 00:25:39,119

the Cairns the the stone can such as you

511

00:25:36,179 --> 00:25:45,359

Grange and lots of them have incredible

512

00:25:39,118 --> 00:25:46,798

acoustics yeah so yes this sorry I can

513

00:25:45,358 --> 00:25:49,769

go on for hours about this because I sat

514
00:25:46,798 --> 00:25:53,249
in there's one on Oakley islands the

515
00:25:49,769 --> 00:25:56,868
islands right up the north of Scotland

516
00:25:53,249 --> 00:26:00,179
where they think a lot of this Neolithic

517
00:25:56,868 --> 00:26:03,089
architecture started and on the island

518
00:26:00,179 --> 00:26:06,929
of Hoyt they there's a can called does

519
00:26:03,089 --> 00:26:08,908
dwarfee stain and because it looks like

520
00:26:06,929 --> 00:26:11,879
a little tune but it's a big rock and

521
00:26:08,909 --> 00:26:14,070
they've come out may I have that may I

522
00:26:11,878 --> 00:26:17,308
interrupt you just for a second having

523
00:26:14,069 --> 00:26:19,858
been there stain is Scottish for stone

524
00:26:17,308 --> 00:26:21,720
for our listeners out there I'm sorry to

525
00:26:19,858 --> 00:26:27,839
interrupt you but just to make things

526
00:26:21,720 --> 00:26:30,028
clear go ahead so sorry Lynn I've been

527
00:26:27,839 --> 00:26:33,418
to the Orkneys I've been to skara brae

528
00:26:30,028 --> 00:26:35,730
I've been to I don't think I've been to

529
00:26:33,419 --> 00:26:39,749
the dwarfee stain but I've been to the

530
00:26:35,730 --> 00:26:43,470
hill Oh stains just cross which is in

531
00:26:39,749 --> 00:26:46,659
it's in Scotland on the mainland but not

532
00:26:43,470 --> 00:26:51,608
too far from the Orkneys and it is more

533
00:26:46,659 --> 00:26:53,769
like the the norman group of stones it's

534
00:26:51,608 --> 00:26:56,908
not a stone circle in my recollection

535
00:26:53,769 --> 00:27:01,388
it's more like being in Karnak in

536
00:26:56,909 --> 00:27:05,919
Normandy wonderful conic I'll try and

537
00:27:01,388 --> 00:27:08,888
keep on topic if you went into an Stan

538
00:27:05,919 --> 00:27:09,879
can the little can right in the middle

539
00:27:08,888 --> 00:27:13,118
of the mainland

540
00:27:09,878 --> 00:27:15,488
the acoustics effect in that a huge but

541
00:27:13,118 --> 00:27:19,538
the dwarf is stayin is just this massive

542

00:27:15,489 --> 00:27:22,210
stone what 10 now be more than that 20

543
00:27:19,538 --> 00:27:24,339
meters long and they've carved out this

544
00:27:22,210 --> 00:27:27,999
bit if you sit cross-legged in it it's

545
00:27:24,339 --> 00:27:31,959
very comfortable and chant the acoustics

546
00:27:27,999 --> 00:27:34,960
are extraordinary and yet thoughts on it

547
00:27:31,960 --> 00:27:37,659
never mention the acoustics they talk

548
00:27:34,960 --> 00:27:40,090
about all sorts of other things and it's

549
00:27:37,659 --> 00:27:43,149
quite extruded in all sorts of those

550
00:27:40,089 --> 00:27:45,009
things and chanted away and got these

551
00:27:43,148 --> 00:27:47,079
effects but that would make the

552
00:27:45,009 --> 00:27:50,499
performance more dramatic and therefore

553
00:27:47,079 --> 00:27:54,069
more memorable of the songs and what was

554
00:27:50,499 --> 00:27:56,440
critical was to memorize remember all

555
00:27:54,069 --> 00:27:59,200
this information because it's not

556
00:27:56,440 --> 00:28:01,830

written down the memories of the elders

557

00:27:59,200 --> 00:28:04,899
were virtually the the cultures

558

00:28:01,829 --> 00:28:06,749
encyclopedia well you know obviously

559

00:28:04,898 --> 00:28:10,268
these people were not silly or stupid

560

00:28:06,749 --> 00:28:11,858
did anyone ever try writing do there any

561

00:28:10,269 --> 00:28:15,669
indication of that because it certainly

562

00:28:11,858 --> 00:28:19,358
bill that simpler writing certainly is

563

00:28:15,669 --> 00:28:21,970
simpler it's depends on how you define

564

00:28:19,358 --> 00:28:25,138
writing if you define it as having a

565

00:28:21,970 --> 00:28:28,569
script mm-hmm not at that stage that

566

00:28:25,138 --> 00:28:32,228
started once people settled and needed

567

00:28:28,569 --> 00:28:36,579
to keep records of trade so most things

568

00:28:32,229 --> 00:28:39,848
started as trade records but others will

569

00:28:36,579 --> 00:28:42,788
tell you that the symbols and all the

570

00:28:39,848 --> 00:28:45,878
artwork and the term art implies

571
00:28:42,788 --> 00:28:47,739
aesthetics first but art certainly for

572
00:28:45,878 --> 00:28:50,469
Aboriginal people and Native American

573
00:28:47,739 --> 00:28:52,629
people primarily is a record of their

574
00:28:50,470 --> 00:28:55,118
knowledge system and they make it

575
00:28:52,628 --> 00:29:00,469
aesthetic as well that that is

576
00:28:55,118 --> 00:29:03,529
effectively the same as writing so just

577
00:29:00,470 --> 00:29:05,509
what you call writing whether they're

578
00:29:03,529 --> 00:29:08,480
right so then if you look at the Inca

579
00:29:05,509 --> 00:29:11,029
people who didn't have a script but they

580
00:29:08,480 --> 00:29:11,720
did have a knotted cord device called a

581
00:29:11,029 --> 00:29:16,009
caboose

582
00:29:11,720 --> 00:29:23,029
sometimes spelt khi PU sometimes qu I PU

583
00:29:16,009 --> 00:29:24,349
and that those knots could be read there

584
00:29:23,029 --> 00:29:26,000
now showing that they're more than just

585
00:29:24,349 --> 00:29:29,029
numeric records they're actually

586
00:29:26,000 --> 00:29:31,430
narrative records they say that that's a

587
00:29:29,029 --> 00:29:34,789
form of writing so it just depends how

588
00:29:31,430 --> 00:29:39,170
you define writing but not a script

589
00:29:34,789 --> 00:29:41,240
no well those does Kipple it seems to me

590
00:29:39,170 --> 00:29:44,830
or when I was reading in your book about

591
00:29:41,240 --> 00:29:48,769
those it seemed to me my mind just

592
00:29:44,829 --> 00:29:50,659
started to roll along and I thought that

593
00:29:48,769 --> 00:29:55,000
that would be an excellent way to

594
00:29:50,660 --> 00:29:58,580
illustrate genealogy absolutely and

595
00:29:55,000 --> 00:30:01,369
genealogy is one of the most complex

596
00:29:58,579 --> 00:30:06,230
areas that all indigenous cultures keep

597
00:30:01,369 --> 00:30:08,239
and they keep genealogies for a number

598
00:30:06,230 --> 00:30:11,089
of reasons

599

00:30:08,240 --> 00:30:13,250
partly for hereditary in those that have

600
00:30:11,089 --> 00:30:15,980
Chiefs and so on but in Australia

601
00:30:13,250 --> 00:30:18,910
Aboriginal cultures in resource rights

602
00:30:15,980 --> 00:30:22,220
who resource rights and resource

603
00:30:18,910 --> 00:30:24,800
responsibilities it's both because the

604
00:30:22,220 --> 00:30:26,600
Aboriginal people if your totem is a

605
00:30:24,799 --> 00:30:28,639
particular animal it's your

606
00:30:26,599 --> 00:30:30,769
responsibility to ensure that it is not

607
00:30:28,640 --> 00:30:33,290
hunted out but it's looked after and so

608
00:30:30,769 --> 00:30:35,269
on so the resource rights and

609
00:30:33,289 --> 00:30:38,119
responsibilities are held within these

610
00:30:35,269 --> 00:30:41,930
genealogies on the relationships to each

611
00:30:38,119 --> 00:30:44,659
other and it's extremely complex at the

612
00:30:41,930 --> 00:30:47,509
beginning of this research over a decade

613
00:30:44,660 --> 00:30:49,880

ago when I got most pretentious young

614

00:30:47,509 --> 00:30:52,670

younger thing not young now it wasn't

615

00:30:49,880 --> 00:30:53,870

young men I asked one of the linguists

616

00:30:52,670 --> 00:30:56,990

that's working with an indigenous

617

00:30:53,869 --> 00:31:00,259

culture in Indonesia why do they keep

618

00:30:56,990 --> 00:31:01,819

such complex genealogies because we know

619

00:31:00,259 --> 00:31:04,369

about genetics and breeding but

620

00:31:01,819 --> 00:31:07,069

obviously they wouldn't and he asked one

621

00:31:04,369 --> 00:31:09,589

of them and the guy said back to him in

622

00:31:07,069 --> 00:31:12,500

their language for resource rights

623

00:31:09,589 --> 00:31:13,519

hereditary rights relationships and he

624

00:31:12,500 --> 00:31:17,240

said but

625

00:31:13,519 --> 00:31:19,309

you white fella know that if you if you

626

00:31:17,240 --> 00:31:22,640

marry somebody close you'll get children

627

00:31:19,309 --> 00:31:25,690

with six fingers and that that's just a

628
00:31:22,640 --> 00:31:29,450
metaphor for you will get in breeding

629
00:31:25,690 --> 00:31:33,590
errors this assumption that their

630
00:31:29,450 --> 00:31:36,769
knowledge is limited is really a result

631
00:31:33,589 --> 00:31:38,419
of we looked for literacy we don't look

632
00:31:36,769 --> 00:31:41,029
at or allottee we don't look at

633
00:31:38,420 --> 00:31:43,009
knowledge and complexity because it's

634
00:31:41,029 --> 00:31:45,740
stored in a form that we're not familiar

635
00:31:43,009 --> 00:31:47,599
with well one of the things that's

636
00:31:45,740 --> 00:31:50,720
interesting they say when the bomb drops

637
00:31:47,599 --> 00:31:52,909
and all of the support of modern culture

638
00:31:50,720 --> 00:31:54,589
goes away most people will start to

639
00:31:52,910 --> 00:31:56,960
death because they have no knowledge of

640
00:31:54,589 --> 00:32:00,740
Agriculture so what you're saying is

641
00:31:56,960 --> 00:32:03,410
that in an undeveloped world knowledge

642
00:32:00,740 --> 00:32:05,240
of Agriculture and how to find various

643
00:32:03,410 --> 00:32:08,540
meats and how to hunt we're certainly

644
00:32:05,240 --> 00:32:10,779
crucial and much more important than I

645
00:32:08,539 --> 00:32:13,700
don't know whatever we have today

646
00:32:10,779 --> 00:32:16,339
absolutely and there's a number of

647
00:32:13,700 --> 00:32:20,090
studies that show that these survival

648
00:32:16,339 --> 00:32:23,299
techniques for extreme cases then you're

649
00:32:20,089 --> 00:32:25,279
drawing on knowledge that could be a

650
00:32:23,299 --> 00:32:26,629
hundred years ago if not longer because

651
00:32:25,279 --> 00:32:29,359
they haven't had a severe drought for

652
00:32:26,630 --> 00:32:31,190
that long that sort of knowledge is held

653
00:32:29,359 --> 00:32:34,339
in the very highly restricted

654
00:32:31,190 --> 00:32:36,380
information so it will include things

655
00:32:34,339 --> 00:32:38,629
like that plant over there that you

656

00:32:36,380 --> 00:32:40,850
never go near because it tastes horrible

657
00:32:38,630 --> 00:32:43,010
if you do this that and the other to it

658
00:32:40,849 --> 00:32:44,689
it is edible and it will keep you alive

659
00:32:43,009 --> 00:32:45,049
you won't like it but they keep you

660
00:32:44,690 --> 00:32:47,000
alive

661
00:32:45,049 --> 00:32:49,609
don't touch that one over there nothing

662
00:32:47,000 --> 00:32:53,180
you do will make it safe that sort of

663
00:32:49,609 --> 00:32:55,639
information is held in these very highly

664
00:32:53,180 --> 00:32:57,860
restricted levels trade agreements

665
00:32:55,640 --> 00:33:00,110
between different cultures in the earth

666
00:32:57,859 --> 00:33:02,539
we're starving you'll help out those

667
00:33:00,109 --> 00:33:04,669
sorts of things are kept at very highly

668
00:33:02,539 --> 00:33:06,740
restricted levels because the

669
00:33:04,670 --> 00:33:08,029
information comes from generations back

670
00:33:06,740 --> 00:33:11,779

and you don't want to start

671
00:33:08,029 --> 00:33:13,399
experimenting with that again you could

672
00:33:11,779 --> 00:33:16,009
lose a lot of people if you eat the

673
00:33:13,400 --> 00:33:19,430
wrong thing um could you give us a

674
00:33:16,009 --> 00:33:22,339
little bit about your take on the giant

675
00:33:19,430 --> 00:33:27,500
drawings of Nazca the Nazca lines

676
00:33:22,339 --> 00:33:30,500
otherwise known as absolutely I was

677
00:33:27,500 --> 00:33:33,279
my attention to those is drawn by one of

678
00:33:30,500 --> 00:33:36,109
the Native American researchers at the

679
00:33:33,279 --> 00:33:38,299
American the National Museum of the

680
00:33:36,109 --> 00:33:40,519
American Indian in Washington because

681
00:33:38,299 --> 00:33:43,069
she was saying that the patterns are

682
00:33:40,519 --> 00:33:46,609
similar to what you get with Native

683
00:33:43,069 --> 00:33:48,679
American patterns but what an Aboriginal

684
00:33:46,609 --> 00:33:51,559
woman here introduced me to is the fact

685
00:33:48,680 --> 00:33:54,830
that if you walk and chant at a regular

686
00:33:51,559 --> 00:33:56,869
rhythm that makes the songs and the

687
00:33:54,829 --> 00:33:58,849
information much more memorable and

688
00:33:56,869 --> 00:34:04,279
they've shown that on the Nazca lines

689
00:33:58,849 --> 00:34:05,359
which are on the big desert campus in

690
00:34:04,279 --> 00:34:08,210
Peru

691
00:34:05,359 --> 00:34:11,929
that had these huge animal glyphs but

692
00:34:08,210 --> 00:34:15,860
also lots of straight lines that the

693
00:34:11,929 --> 00:34:18,079
huge animal images are all walkable even

694
00:34:15,860 --> 00:34:20,210
no matter how complex they are no

695
00:34:18,079 --> 00:34:22,819
tonight no lines cross each other so

696
00:34:20,210 --> 00:34:24,710
then they go in and out so one person

697
00:34:22,820 --> 00:34:27,169
walking up will do the whole thing and

698
00:34:24,710 --> 00:34:29,179
come out again without crossing paths

699
00:34:27,168 --> 00:34:33,019
with anyone behind them or ahead of them

700
00:34:29,179 --> 00:34:35,269
and so if you are chanting those stories

701
00:34:33,019 --> 00:34:37,369
walking those lines and changing the

702
00:34:35,269 --> 00:34:38,869
stories would be hugely memorable

703
00:34:37,369 --> 00:34:41,989
there's a myth

704
00:34:38,869 --> 00:34:45,918
there's myths myths in the falsehoods

705
00:34:41,989 --> 00:34:48,168
term not indigenous mythology term there

706
00:34:45,918 --> 00:34:50,359
are myths about them that they can only

707
00:34:48,168 --> 00:34:52,369
be seen by from the air therefore they

708
00:34:50,360 --> 00:34:55,490
must have been aliens or balloons it's

709
00:34:52,369 --> 00:34:58,219
all not true they can be seen from the

710
00:34:55,489 --> 00:34:59,899
little Hills but the evidence is very

711
00:34:58,219 --> 00:35:02,239
clear that they were designed to be

712
00:34:59,900 --> 00:35:03,920
walked whether they even wanted to see

713

00:35:02,239 --> 00:35:07,279
them because the same patterns are on

714
00:35:03,920 --> 00:35:10,519
the pottery but without that detail of

715
00:35:07,280 --> 00:35:13,340
being able to walk it so these are the

716
00:35:10,519 --> 00:35:15,349
animals that were the characters that

717
00:35:13,340 --> 00:35:18,710
told their stories that form there are

718
00:35:15,349 --> 00:35:21,589
all tradition well some of the people of

719
00:35:18,710 --> 00:35:25,400
those tribes are still with us today

720
00:35:21,590 --> 00:35:28,430
have any memories themselves today's

721
00:35:25,400 --> 00:35:30,769
descendants of those people there are a

722
00:35:28,429 --> 00:35:33,079
few and the stories this is why is joy

723
00:35:30,769 --> 00:35:34,880
in Aboriginal cultures are so useful for

724
00:35:33,079 --> 00:35:37,369
this sort of research because we're

725
00:35:34,880 --> 00:35:40,838
looking at a 40 to 60 thousand year

726
00:35:37,369 --> 00:35:43,018
continuous culture and few low

727
00:35:40,838 --> 00:35:47,199

Asians where the contact was very recent

728

00:35:43,018 --> 00:35:49,419

certainly only last century you have got

729

00:35:47,199 --> 00:35:53,139

the traditions intact but not a lot

730

00:35:49,420 --> 00:35:56,588

because as soon as you get contact with

731

00:35:53,139 --> 00:35:59,228

literacy and with Western culture it's

732

00:35:56,588 --> 00:36:00,998

just so much easier why would you go to

733

00:35:59,228 --> 00:36:04,538

so much work so they're having a lot of

734

00:36:00,998 --> 00:36:06,818

trouble getting the youth to do all the

735

00:36:04,539 --> 00:36:08,920

training and it's years and years you

736

00:36:06,818 --> 00:36:11,498

know there's evidence from all over the

737

00:36:08,920 --> 00:36:14,409

world that you're looking at 10 years 20

738

00:36:11,498 --> 00:36:17,199

years of intense training to get this

739

00:36:14,409 --> 00:36:18,399

full body of knowledge and nobody's

740

00:36:17,199 --> 00:36:21,068

going to do it when you can just write

741

00:36:18,400 --> 00:36:23,079

it down well but that's true with

742
00:36:21,068 --> 00:36:25,298
today's our fields of interest I mean

743
00:36:23,079 --> 00:36:28,869
certainly for a good chemist it takes a

744
00:36:25,298 --> 00:36:31,509
good 15 20 years to learn all of the ins

745
00:36:28,869 --> 00:36:33,670
and outs and that is written down but

746
00:36:31,509 --> 00:36:38,440
you still have to put it in your mind as

747
00:36:33,670 --> 00:36:42,450
well yes and that's why with writing you

748
00:36:38,440 --> 00:36:45,849
can go to much more depth in even

749
00:36:42,449 --> 00:36:47,739
discipline whereas the Aboriginal elders

750
00:36:45,849 --> 00:36:50,979
had to retain the entire knowledge

751
00:36:47,739 --> 00:36:53,048
system yeah all the disciplines once you

752
00:36:50,978 --> 00:36:54,998
start settling if you look at the Native

753
00:36:53,048 --> 00:36:57,159
American cultures there you get

754
00:36:54,998 --> 00:36:58,808
specialists in the different you know

755
00:36:57,159 --> 00:37:00,308
the corn society the snake society

756
00:36:58,809 --> 00:37:03,849
medicine Society and so on

757
00:37:00,309 --> 00:37:06,339
and that stops anyone completely

758
00:37:03,849 --> 00:37:10,749
controlling the information because the

759
00:37:06,338 --> 00:37:14,858
ultra zone at egalitarian those that do

760
00:37:10,748 --> 00:37:17,828
not have individual wealth who knows

761
00:37:14,858 --> 00:37:19,869
cultures knowledge was power controlling

762
00:37:17,829 --> 00:37:22,960
it from poaching was the control of

763
00:37:19,869 --> 00:37:26,130
power and there's a built in systems in

764
00:37:22,960 --> 00:37:29,739
Africa America everywhere to stop anyone

765
00:37:26,130 --> 00:37:32,309
exploiting that power whereas as soon as

766
00:37:29,739 --> 00:37:36,460
you get individual wealth the knowledge

767
00:37:32,309 --> 00:37:38,469
experts become servants to the wealthy

768
00:37:36,460 --> 00:37:41,528
leaders so in Africa you get the griot

769
00:37:38,469 --> 00:37:44,079
s-- who will recite all this information

770

00:37:41,528 --> 00:37:46,719
they're powerful they're wealthy but

771
00:37:44,079 --> 00:37:48,339
they not the absolute bosses and then in

772
00:37:46,719 --> 00:37:50,000
the neolithic you'll move into the

773
00:37:48,338 --> 00:37:54,809
Druids who are

774
00:37:50,000 --> 00:37:56,820
mm-hmm yes the truest they are your

775
00:37:54,809 --> 00:38:00,690
knowledge elite they are using these

776
00:37:56,820 --> 00:38:04,170
methods but they are no longer the

777
00:38:00,690 --> 00:38:08,309
absolute power because violence and

778
00:38:04,170 --> 00:38:10,730
wealth is more powerful than knowledge

779
00:38:08,309 --> 00:38:13,559
do you think what that these

780
00:38:10,730 --> 00:38:18,000
particularly the Druids do you think

781
00:38:13,559 --> 00:38:22,710
that there are persons today in secret

782
00:38:18,000 --> 00:38:25,010
societies who continue to have special

783
00:38:22,710 --> 00:38:27,358
knowledge that may have been passed down

784
00:38:25,010 --> 00:38:29,550

basically from the time of the Druids

785

00:38:27,358 --> 00:38:32,098

from the time of Merlin and King Arthur

786

00:38:29,550 --> 00:38:35,339

I mean there have been secret societies

787

00:38:32,099 --> 00:38:38,880

across Europe and in in in the Far East

788

00:38:35,338 --> 00:38:40,849

as well I can't really speak anywhere

789

00:38:38,880 --> 00:38:45,358

nearly as well as you can on on

790

00:38:40,849 --> 00:38:47,789

Australia but in terms of of Great

791

00:38:45,358 --> 00:38:50,838

Britain Europe and the Far East there

792

00:38:47,789 --> 00:38:54,119

there still remains secret societies

793

00:38:50,838 --> 00:38:56,549

it's certainly possible if they're using

794

00:38:54,119 --> 00:38:58,588

these methods they're extremely robust I

795

00:38:56,550 --> 00:39:01,829

don't have evidence of that because as

796

00:38:58,588 --> 00:39:04,469

soon as the cultures settled and we're

797

00:39:01,829 --> 00:39:06,750

no longer material egalitarian I stopped

798

00:39:04,469 --> 00:39:09,088

looking at them I have talked to experts

799

00:39:06,750 --> 00:39:10,639

on the Druids when I've been in the

800

00:39:09,088 --> 00:39:15,690

Britain and they've asked me to

801

00:39:10,639 --> 00:39:18,539

hypothetically take my systems for 2,000

802

00:39:15,690 --> 00:39:21,539

years and they say that it certainly

803

00:39:18,539 --> 00:39:23,039

matches the archaeology but I don't have

804

00:39:21,539 --> 00:39:26,519

the expertise to look at that I'm

805

00:39:23,039 --> 00:39:30,358

certainly looking at that now but the

806

00:39:26,519 --> 00:39:32,509

artwork is certainly a memory aid and

807

00:39:30,358 --> 00:39:34,828

that's been shown right into the

808

00:39:32,510 --> 00:39:37,589

medieval and renaissance times and

809

00:39:34,829 --> 00:39:40,050

certainly the druid and Celtic you know

810

00:39:37,588 --> 00:39:42,900

you've got all sorts there's so much my

811

00:39:40,050 --> 00:39:49,440

poor brain can't cope with it you have

812

00:39:42,900 --> 00:39:52,588

to learn a new song yeah so there's lots

813
00:39:49,440 --> 00:39:55,380
of directions I'd like to go but I've

814
00:39:52,588 --> 00:39:59,389
only 24 hours in a day have you looked

815
00:39:55,380 --> 00:40:02,760
much at a gold-backed gobekli tepe

816
00:39:59,389 --> 00:40:03,750
Turkey I have looked I mentioned it

817
00:40:02,760 --> 00:40:06,260
briefly in the

818
00:40:03,750 --> 00:40:08,309
Rico and I've been in in contact with

819
00:40:06,260 --> 00:40:10,860
archeologists from there since it

820
00:40:08,309 --> 00:40:13,650
certainly fits a pattern so god Beckley

821
00:40:10,860 --> 00:40:17,610
Tepe is a hunter-gatherer site there's

822
00:40:13,650 --> 00:40:19,710
no sign of farming and you have exactly

823
00:40:17,610 --> 00:40:22,079
what you would expect for memory palaces

824
00:40:19,710 --> 00:40:25,440
the set of pillars in a structure within

825
00:40:22,079 --> 00:40:27,989
a restricted location and sets of them

826
00:40:25,440 --> 00:40:31,139
and it sort of changes with time and

827

00:40:27,989 --> 00:40:36,139
they're decorated pillars in a totally

828
00:40:31,139 --> 00:40:39,029
structured order and it fits the pattern

829
00:40:36,139 --> 00:40:42,659
absolutely perfectly it's incredibly

830
00:40:39,030 --> 00:40:46,290
sophisticated for something that was

831
00:40:42,659 --> 00:40:49,289
built over 12,000 years ago even though

832
00:40:46,289 --> 00:40:52,079
they don't have obvious language there

833
00:40:49,289 --> 00:40:56,099
that in the sense of literacy as opposed

834
00:40:52,079 --> 00:40:58,739
to orality it is incredibly

835
00:40:56,099 --> 00:41:02,130
sophisticated for a hunter gathers

836
00:40:58,739 --> 00:41:06,179
gatherer society and includes animals

837
00:41:02,130 --> 00:41:09,440
that we no longer know of true and the

838
00:41:06,179 --> 00:41:11,519
the thing is that we assume that

839
00:41:09,440 --> 00:41:14,119
hunter-gatherers didn't have the same

840
00:41:11,519 --> 00:41:17,280
intellectual curiosity that we do and

841
00:41:14,119 --> 00:41:21,179

obviously they do because they're human

842

00:41:17,280 --> 00:41:24,900

and so of those Navajo 800 insects they

843

00:41:21,179 --> 00:41:27,089

only ate about ten of them sorry ate

844

00:41:24,900 --> 00:41:28,889

about one of them the cicada about 10

845

00:41:27,090 --> 00:41:31,440

minutes and things like that all the

846

00:41:28,889 --> 00:41:34,139

rest were known because they liked

847

00:41:31,440 --> 00:41:36,780

knowing and they used them as metaphor

848

00:41:34,139 --> 00:41:41,190

we have studies in Australia that showed

849

00:41:36,780 --> 00:41:43,260

that stories were traded because it's

850

00:41:41,190 --> 00:41:45,929

information just like we pay for

851

00:41:43,260 --> 00:41:46,380

education traded right across the

852

00:41:45,929 --> 00:41:49,469

country

853

00:41:46,380 --> 00:41:53,160

and so people in the very south of the

854

00:41:49,469 --> 00:41:56,159

country could talk about animals from

855

00:41:53,159 --> 00:41:58,529

the north and describe them so a lot of

856
00:41:56,159 --> 00:42:01,170
cave art is of animals that would did

857
00:41:58,530 --> 00:42:03,930
not occur in that area because it's

858
00:42:01,170 --> 00:42:05,970
knowledge and yeah just as you probably

859
00:42:03,929 --> 00:42:07,799
know about giraffes but don't have them

860
00:42:05,969 --> 00:42:12,239
locally

861
00:42:07,800 --> 00:42:15,568
that's human brain is curious absolutely

862
00:42:12,239 --> 00:42:18,838
and I totally agree with you I believe

863
00:42:15,568 --> 00:42:22,528
as you believe that hunter-gatherers do

864
00:42:18,838 --> 00:42:25,889
not lack for intellectual curiosity my

865
00:42:22,528 --> 00:42:29,599
only point about gobekli tepe

866
00:42:25,889 --> 00:42:32,608
that seems to me different than other

867
00:42:29,599 --> 00:42:37,140
hunter-gatherer societies like those in

868
00:42:32,608 --> 00:42:40,108
Africa and Australia is the level of the

869
00:42:37,139 --> 00:42:44,400
competency in the sculpture and the

870
00:42:40,108 --> 00:42:46,380
artwork seems to be at another level it

871
00:42:44,400 --> 00:42:50,639
just seems like it's it's gone to

872
00:42:46,380 --> 00:42:53,849
another place that I'm I don't I'm not

873
00:42:50,639 --> 00:42:56,159
an archaeologist so I can't say whether

874
00:42:53,849 --> 00:43:01,229
these people were hunter-gatherers or

875
00:42:56,159 --> 00:43:04,338
not but they're there their remains

876
00:43:01,228 --> 00:43:08,239
their their monuments seem much more

877
00:43:04,338 --> 00:43:10,858
like Greek or Roman monuments or

878
00:43:08,239 --> 00:43:13,829
Egyptian monuments than they do like

879
00:43:10,858 --> 00:43:17,369
hunter-gatherer monuments I am NOT an

880
00:43:13,829 --> 00:43:20,539
expert so forgive me I'm it's not in the

881
00:43:17,369 --> 00:43:24,269
sense of an argument only how I see it

882
00:43:20,539 --> 00:43:26,430
yeah I can see what you're saying but if

883
00:43:24,268 --> 00:43:29,669
you look at the artwork of the Lubar

884

00:43:26,429 --> 00:43:32,429
people of Africa it is staggeringly

885
00:43:29,670 --> 00:43:37,650
beautiful and then if you look at some

886
00:43:32,429 --> 00:43:39,929
of the cave art here in Australia you'll

887
00:43:37,650 --> 00:43:45,719
find some of it looks very sophisticated

888
00:43:39,929 --> 00:43:48,778
I hadn't seen that with gobekli tepe to

889
00:43:45,719 --> 00:43:52,139
me it looked indigenous hunter-gatherer

890
00:43:48,778 --> 00:43:54,630
okay so I haven't seen that but I'll

891
00:43:52,139 --> 00:43:58,558
look at it again from that context it's

892
00:43:54,630 --> 00:44:01,798
certainly beautiful they all yes they

893
00:43:58,559 --> 00:44:04,199
all of this cultures my personal

894
00:44:01,798 --> 00:44:06,989
reaction to the carvings of the Luba

895
00:44:04,199 --> 00:44:10,259
people and they had it there from West

896
00:44:06,989 --> 00:44:12,989
Africa and they have this stunningly

897
00:44:10,259 --> 00:44:14,458
beautiful carving but it's also through

898
00:44:12,989 --> 00:44:17,099

them that I understood about these

899

00:44:14,458 --> 00:44:19,919

portable devices because they used a

900

00:44:17,099 --> 00:44:25,979

handheld device known as a Lucas are a

901

00:44:19,920 --> 00:44:27,599

UK a a that a memory board that once I

902

00:44:25,978 --> 00:44:28,969

started reading the research on it

903

00:44:27,599 --> 00:44:31,769

because some of the

904

00:44:28,969 --> 00:44:34,739

America anthropologists were initiated

905

00:44:31,769 --> 00:44:36,780

to the first levels of it I frankly

906

00:44:34,739 --> 00:44:39,539

didn't believe it that they could encode

907

00:44:36,780 --> 00:44:41,369

all this stuff to a bit of wood with

908

00:44:39,539 --> 00:44:43,019

beads and a bit of carving and some

909

00:44:41,369 --> 00:44:45,329

beads nailed on and the shells and

910

00:44:43,019 --> 00:44:47,730

things so I grabbed myself a piece of

911

00:44:45,329 --> 00:44:52,710

wood I glued on some beads and shells

912

00:44:47,730 --> 00:44:56,400

and I started encoding the field guide

913
00:44:52,710 --> 00:44:58,349
to the Victorian Birds 412 native birds

914
00:44:56,400 --> 00:45:00,780
it was 408 when I wrote the book I think

915
00:44:58,349 --> 00:45:07,079
but there's been form for more moved in

916
00:45:00,780 --> 00:45:09,960
I might and I could not believe how well

917
00:45:07,079 --> 00:45:12,630
I could encode I now use that as a

918
00:45:09,960 --> 00:45:14,909
complete field god I have the whole 412

919
00:45:12,630 --> 00:45:18,269
there in taxonomic order so the shells

920
00:45:14,909 --> 00:45:22,078
represent the 82 families and then

921
00:45:18,269 --> 00:45:25,349
stories encode the birds within those so

922
00:45:22,079 --> 00:45:28,950
if we're out birding I have a complete

923
00:45:25,349 --> 00:45:30,599
list so my husband we saw a bird one day

924
00:45:28,949 --> 00:45:33,568
that he couldn't recognize locally which

925
00:45:30,599 --> 00:45:35,190
is not usual for him and it was a honey

926
00:45:33,568 --> 00:45:38,130
eater which is our biggest family and

927
00:45:35,190 --> 00:45:40,050
they did birds with little the nearest

928
00:45:38,130 --> 00:45:40,980
is your hummingbirds there's not really

929
00:45:40,050 --> 00:45:48,150
nothing like it

930
00:45:40,980 --> 00:45:50,818
but there's 26 no 36 of them so I reel

931
00:45:48,150 --> 00:45:53,608
off the 36 and he was a labeled able to

932
00:45:50,818 --> 00:45:56,159
do an elimination and come down to the

933
00:45:53,608 --> 00:45:58,500
juvenile of a particular species so by

934
00:45:56,159 --> 00:46:01,318
having this complete bird guide in my

935
00:45:58,500 --> 00:46:03,269
head I'm seeing patterns and things that

936
00:46:01,318 --> 00:46:05,789
I wouldn't see if I was doing them as

937
00:46:03,269 --> 00:46:08,818
individuals so I could not believe that

938
00:46:05,789 --> 00:46:10,318
this device would work until I tried it

939
00:46:08,818 --> 00:46:12,389
and now there's been lots of people

940
00:46:10,318 --> 00:46:15,088
making them in all sorts of formats and

941

00:46:12,389 --> 00:46:18,659
finding the same thing these memory

942
00:46:15,088 --> 00:46:22,500
methods are extraordinarily effective am

943
00:46:18,659 --> 00:46:25,710
I correct in saying that you are working

944
00:46:22,500 --> 00:46:28,949
on another book that will be instructive

945
00:46:25,710 --> 00:46:32,460
to individuals such as myself or Miss

946
00:46:28,949 --> 00:46:35,669
Kate Valentine on how to construct a

947
00:46:32,460 --> 00:46:38,300
memory palace and a memory board we have

948
00:46:35,670 --> 00:46:38,300
smartphones

949
00:46:41,769 --> 00:46:47,440
what about the memory code ah okay how

950
00:46:45,130 --> 00:46:49,990
do we actually do it I thought it would

951
00:46:47,440 --> 00:46:51,760
be the archaeology well new theories for

952
00:46:49,989 --> 00:46:55,019
the monuments that would attract the

953
00:46:51,760 --> 00:46:57,970
attention and it does but mostly it's

954
00:46:55,019 --> 00:47:00,820
these memory methods are extraordinary

955
00:46:57,969 --> 00:47:02,589

they have only not been so used right

956

00:47:00,820 --> 00:47:06,309

across the world and right into the

957

00:47:02,590 --> 00:47:08,289

Renaissance so it's only the last four

958

00:47:06,309 --> 00:47:10,420

hundred years or so of Western culture

959

00:47:08,289 --> 00:47:13,000

that we haven't used them and memory

960

00:47:10,420 --> 00:47:15,550

champions and so on still use them but

961

00:47:13,000 --> 00:47:18,099

they don't use all this complexity of

962

00:47:15,550 --> 00:47:20,620

interweaving song and dance and memory

963

00:47:18,099 --> 00:47:24,190

boards and memory palaces all together

964

00:47:20,619 --> 00:47:26,949

and so I'm actually writing exactly as

965

00:47:24,190 --> 00:47:28,630

you say a book about how to do this and

966

00:47:26,949 --> 00:47:30,969

I'm doing the sorts of things people

967

00:47:28,630 --> 00:47:32,500

asked like how do you do it to memorize

968

00:47:30,969 --> 00:47:34,839

a language when you're learning a

969

00:47:32,500 --> 00:47:37,239

language now I was really bad with

970
00:47:34,840 --> 00:47:40,410
languages at school and hated them so

971
00:47:37,239 --> 00:47:43,269
I've gone back to doing French and

972
00:47:40,409 --> 00:47:46,679
adjusting the way I'm learning to draw

973
00:47:43,269 --> 00:47:49,420
on all these methods and I am loving it

974
00:47:46,679 --> 00:47:52,210
it's just a much more natural way to

975
00:47:49,420 --> 00:47:54,340
learn and more effective and more fun so

976
00:47:52,210 --> 00:47:57,220
that's exactly what the new book is well

977
00:47:54,340 --> 00:47:59,320
that that is just extremely interesting

978
00:47:57,219 --> 00:48:02,969
I wanted to make a funny point here

979
00:47:59,320 --> 00:48:07,420
about writing and today's culture

980
00:48:02,969 --> 00:48:10,509
because I am struck not being a child

981
00:48:07,420 --> 00:48:14,349
myself having learned to write

982
00:48:10,510 --> 00:48:17,890
compositions and writing a blog and so

983
00:48:14,349 --> 00:48:19,989
forth I you know I have learned to write

984
00:48:17,889 --> 00:48:21,549
not I don't think I'm Hemingway I don't

985
00:48:19,989 --> 00:48:26,139
think I'm great but I am constantly

986
00:48:21,550 --> 00:48:29,470
struck by people under 35 who can't

987
00:48:26,139 --> 00:48:33,129
construct a sentence so we may be

988
00:48:29,469 --> 00:48:37,149
slipping back into the free literate

989
00:48:33,130 --> 00:48:41,530
state once again except the preliterate

990
00:48:37,150 --> 00:48:44,650
state with Azure ality yes whatever they

991
00:48:41,530 --> 00:48:48,490
took the lack of literacy and delay and

992
00:48:44,650 --> 00:48:50,470
no reality at all so you know this would

993
00:48:48,489 --> 00:48:54,039
be a worry I've been working in schools

994
00:48:50,469 --> 00:48:55,578
and one thing we found memory palaces

995
00:48:54,039 --> 00:48:58,369
are hugely effective

996
00:48:55,579 --> 00:49:01,099
but it's the way of constructing stories

997
00:48:58,369 --> 00:49:03,440
and using characters now the Pueblo

998

00:49:01,099 --> 00:49:06,349
people call their characters Kachina and

999
00:49:03,440 --> 00:49:08,900
they have active about two hundred and

1000
00:49:06,349 --> 00:49:11,239
fifty at a given time that dance and act

1001
00:49:08,900 --> 00:49:13,670
out all the stories and information so

1002
00:49:11,239 --> 00:49:15,440
we tried this at a primary school and we

1003
00:49:13,670 --> 00:49:17,509
didn't call them Kachina because that

1004
00:49:15,440 --> 00:49:20,298
would be inappropriate and all cultures

1005
00:49:17,509 --> 00:49:22,248
have these mythological characters that

1006
00:49:20,298 --> 00:49:25,869
tell the stories we called them

1007
00:49:22,248 --> 00:49:29,509
rapscallions because we wanted a lively

1008
00:49:25,869 --> 00:49:31,599
name and so that the kids each made a

1009
00:49:29,509 --> 00:49:33,559
little character and they also

1010
00:49:31,599 --> 00:49:35,690
incorporated their own toys as

1011
00:49:33,559 --> 00:49:37,940
characters and started telling the

1012
00:49:35,690 --> 00:49:42,079

stories and we did mathematical tables

1013

00:49:37,940 --> 00:49:45,369

that way but also argumentative texts

1014

00:49:42,079 --> 00:49:47,509

and I can go on for hours about this but

1015

00:49:45,369 --> 00:49:49,489

argumentative text is something where

1016

00:49:47,509 --> 00:49:51,079

the kids are the children's students

1017

00:49:49,489 --> 00:49:53,259

whatever you respectfully want to call

1018

00:49:51,079 --> 00:49:53,259

them

1019

00:49:57,219 --> 00:50:08,170

hello yeah it's our M but not to just

1020

00:50:04,338 --> 00:50:12,139

continue on don't worry about it okay

1021

00:50:08,170 --> 00:50:15,709

students have argue a case and these are

1022

00:50:12,139 --> 00:50:19,278

little students were from Cheers up to

1023

00:50:15,708 --> 00:50:21,228

12 years if they had that character

1024

00:50:19,278 --> 00:50:24,259

sitting on the desk in front of them and

1025

00:50:21,228 --> 00:50:26,899

they had to convince that character the

1026

00:50:24,259 --> 00:50:29,659

quality of their writing improved

1027
00:50:26,900 --> 00:50:33,380
massively and then the teacher made them

1028
00:50:29,659 --> 00:50:34,759
right the rapscallions approach once

1029
00:50:33,380 --> 00:50:36,079
they started building up these

1030
00:50:34,759 --> 00:50:38,478
characters and they were using each

1031
00:50:36,079 --> 00:50:41,630
other's as well as their own in their

1032
00:50:38,478 --> 00:50:44,268
studies no matter what topic they

1033
00:50:41,630 --> 00:50:47,630
started getting much better information

1034
00:50:44,268 --> 00:50:49,758
so we started adding in song the

1035
00:50:47,630 --> 00:50:53,119
students all had to do force because

1036
00:50:49,759 --> 00:50:55,639
force is one of the key aspects of their

1037
00:50:53,119 --> 00:50:57,680
science curriculum they'd all done study

1038
00:50:55,639 --> 00:51:00,618
a couple of hours of force and I went to

1039
00:50:57,679 --> 00:51:02,448
each student and said a week later do

1040
00:51:00,619 --> 00:51:05,088
you remember doing force in science yes

1041
00:51:02,449 --> 00:51:07,130
what is a force and three out of the

1042
00:51:05,088 --> 00:51:08,929
seventy told me it was a push or pull

1043
00:51:07,130 --> 00:51:09,470
the other said it's what sent the

1044
00:51:08,929 --> 00:51:12,079
balloon

1045
00:51:09,469 --> 00:51:17,868
the road and a lot of them said it's may

1046
00:51:12,079 --> 00:51:21,469
the force be with you teacher then a

1047
00:51:17,869 --> 00:51:24,170
little song using the Imperial March of

1048
00:51:21,469 --> 00:51:25,969
force is a push or pull push a pull and

1049
00:51:24,170 --> 00:51:28,579
I'm doing the actions now sitting here

1050
00:51:25,969 --> 00:51:30,829
because he put a little dance to it they

1051
00:51:28,579 --> 00:51:33,858
did that once then and once an assembly

1052
00:51:30,829 --> 00:51:36,170
not again for a week and I did the exact

1053
00:51:33,858 --> 00:51:38,690
same wording and every single student

1054
00:51:36,170 --> 00:51:42,740
told me a force is a push or a pull and

1055

00:51:38,690 --> 00:51:45,079
did the actions now until then the

1056
00:51:42,739 --> 00:51:47,750
teachers every time I mentioned force

1057
00:51:45,079 --> 00:51:49,880
and built that curriculum were building

1058
00:51:47,750 --> 00:51:53,090
on sand because most of the students

1059
00:51:49,880 --> 00:51:57,050
were not thoroughly using the word force

1060
00:51:53,090 --> 00:51:59,510
or concept as science uses it so just

1061
00:51:57,050 --> 00:52:01,880
that little idea of waking it into a

1062
00:51:59,510 --> 00:52:04,790
song and getting those definitions right

1063
00:52:01,880 --> 00:52:07,880
can change everything so these methods

1064
00:52:04,789 --> 00:52:11,659
form a solid foundation and then the

1065
00:52:07,880 --> 00:52:14,240
higher levels of learning of analysis

1066
00:52:11,659 --> 00:52:16,309
and theory and so can build on that I

1067
00:52:14,239 --> 00:52:19,279
think that's what we're losing in

1068
00:52:16,309 --> 00:52:21,980
education is that solid foundation on

1069
00:52:19,280 --> 00:52:25,730

which you can build I think that this is

1070

00:52:21,980 --> 00:52:28,960

a really a fascinating topic and I wish

1071

00:52:25,730 --> 00:52:32,570

we could continue on for a lot longer

1072

00:52:28,960 --> 00:52:35,210

unfortunately we can't at this juncture

1073

00:52:32,570 --> 00:52:38,269

perhaps we could have you on again when

1074

00:52:35,210 --> 00:52:41,139

you have your next book out however I

1075

00:52:38,269 --> 00:52:45,880

wanted to close with the question

1076

00:52:41,139 --> 00:52:49,789

because here at shattered reality we are

1077

00:52:45,880 --> 00:52:53,960

interested in edge science and frankly

1078

00:52:49,789 --> 00:52:57,050

paranormal phenomena and a lot of things

1079

00:52:53,960 --> 00:53:00,349

that can't readily be explained and one

1080

00:52:57,050 --> 00:53:04,190

of the general topics that seems to come

1081

00:53:00,349 --> 00:53:07,490

up is the topic of forbidden archeology

1082

00:53:04,190 --> 00:53:09,650

that is the catch phrase that is used in

1083

00:53:07,489 --> 00:53:13,118

the United States and maybe in Australia

1084
00:53:09,650 --> 00:53:17,420
too for all I know but it it sort of

1085
00:53:13,119 --> 00:53:20,240
stems around things that archeologists

1086
00:53:17,420 --> 00:53:23,000
have told stories down through the years

1087
00:53:20,239 --> 00:53:25,069
that this happened in Egypt and they

1088
00:53:23,000 --> 00:53:27,530
was separated from the people in

1089
00:53:25,070 --> 00:53:31,309
Australia and from the people in the

1090
00:53:27,530 --> 00:53:35,360
Americas and everybody was living in

1091
00:53:31,309 --> 00:53:40,070
caves before the Year 7000 or something

1092
00:53:35,360 --> 00:53:42,410
like the 7000 BC and now we're coming to

1093
00:53:40,070 --> 00:53:45,950
see that some of those quote unquote

1094
00:53:42,409 --> 00:53:48,259
facts may not be exactly the case now I

1095
00:53:45,949 --> 00:53:51,139
am not making a case for any one

1096
00:53:48,260 --> 00:53:53,450
particular persons theories but what I

1097
00:53:51,139 --> 00:53:57,440
will the question I wanted to ask you

1098
00:53:53,449 --> 00:54:01,730
lyn is simply have you been in contact

1099
00:53:57,440 --> 00:54:05,450
with some of these other people who are

1100
00:54:01,730 --> 00:54:09,110
scholars in their own right who think

1101
00:54:05,449 --> 00:54:13,369
that archaeology as was told in the year

1102
00:54:09,110 --> 00:54:16,820
1920 and perpetuated since then might

1103
00:54:13,369 --> 00:54:18,799
not be exactly the way it is well better

1104
00:54:16,820 --> 00:54:21,260
be Michael Cremona would be the main

1105
00:54:18,800 --> 00:54:24,560
architect oh well I also think of Robert

1106
00:54:21,260 --> 00:54:29,420
Schoch and John Anthony West and people

1107
00:54:24,559 --> 00:54:33,199
like that I have veining with some I'm

1108
00:54:29,420 --> 00:54:36,280
not qualified to I'm not knocking oh

1109
00:54:33,199 --> 00:54:40,609
just feeeel these orality

1110
00:54:36,280 --> 00:54:44,830
I certainly think archaeology has lacked

1111
00:54:40,610 --> 00:54:47,539
a recognition of the intellectual side

1112

00:54:44,829 --> 00:54:50,809
for me the common factor is the human

1113
00:54:47,539 --> 00:54:54,139
brain I don't think I'm qualified to

1114
00:54:50,809 --> 00:54:56,150
assess that but at the moment a lot of

1115
00:54:54,139 --> 00:54:59,480
archaeologists are looking much more

1116
00:54:56,150 --> 00:55:02,360
deeper at the way the human brain works

1117
00:54:59,480 --> 00:55:05,829
how emotions work a reaction to

1118
00:55:02,360 --> 00:55:09,349
landscape being far more emotional than

1119
00:55:05,829 --> 00:55:12,739
the purely pragmatic approach that's

1120
00:55:09,349 --> 00:55:14,989
been used but I'm far from the person

1121
00:55:12,739 --> 00:55:17,089
that that's an authority to be able to

1122
00:55:14,989 --> 00:55:20,539
talk about those things I still come

1123
00:55:17,090 --> 00:55:22,460
from a fairly scientific aspect but

1124
00:55:20,539 --> 00:55:24,529
admit there are things that happened

1125
00:55:22,460 --> 00:55:27,320
like happened to me at Chaco Canyon that

1126
00:55:24,530 --> 00:55:29,750

I can't explain and I'm perfectly happy

1127

00:55:27,320 --> 00:55:32,570

to say that I don't know everything and

1128

00:55:29,750 --> 00:55:35,389

I would only archaeologist I've dealt

1129

00:55:32,570 --> 00:55:36,990

with certainly in Australia feel the

1130

00:55:35,389 --> 00:55:39,989

same that they've only tap

1131

00:55:36,989 --> 00:55:42,029

the surface I think probably with you

1132

00:55:39,989 --> 00:55:45,029

and I think perhaps though that you may

1133

00:55:42,030 --> 00:55:49,230

have misunderstood me somebody like

1134

00:55:45,030 --> 00:55:51,990

Robert Schoch is a is a is a geologist

1135

00:55:49,230 --> 00:55:56,099

and the things that he talks about are

1136

00:55:51,989 --> 00:55:58,769

not that spiritually inclined per se but

1137

00:55:56,099 --> 00:56:01,890

because you had some interesting work on

1138

00:55:58,769 --> 00:56:05,159

Easter Island and he has done some very

1139

00:56:01,889 --> 00:56:09,838

interesting fact based work on Easter

1140

00:56:05,159 --> 00:56:10,348

Island as well as on Egypt and gobekli

1141
00:56:09,838 --> 00:56:12,929
tepe

1142
00:56:10,349 --> 00:56:16,769
I always don't pronounce that right but

1143
00:56:12,929 --> 00:56:18,299
I would and and it's not about most of

1144
00:56:16,769 --> 00:56:22,588
his stuff is really not about

1145
00:56:18,300 --> 00:56:25,440
spirituality but more about the ages of

1146
00:56:22,588 --> 00:56:28,500
these things I would think that your

1147
00:56:25,440 --> 00:56:30,000
work in the oral tradition the orality

1148
00:56:28,500 --> 00:56:33,480
if you will

1149
00:56:30,000 --> 00:56:35,460
might nicely augment some of his

1150
00:56:33,480 --> 00:56:37,679
findings and I'm only I'm only

1151
00:56:35,460 --> 00:56:44,250
suggesting that you look into it perhaps

1152
00:56:37,679 --> 00:56:47,009
and I suggest that with with all due

1153
00:56:44,250 --> 00:56:48,780
respect to you that sounds very

1154
00:56:47,010 --> 00:56:51,270
interesting I've avoided everything to

1155
00:56:48,780 --> 00:56:54,900
do with Egypt because those cultures

1156
00:56:51,269 --> 00:56:59,730
were all literate so I'm looking at that

1157
00:56:54,900 --> 00:57:01,980
now yes I'll absolutely look into it but

1158
00:56:59,730 --> 00:57:06,630
I can't comment on something I know

1159
00:57:01,980 --> 00:57:10,139
nothing about all right well I just I

1160
00:57:06,630 --> 00:57:12,660
saw it out there and and I think that

1161
00:57:10,139 --> 00:57:14,969
that's about no we have not mentioned

1162
00:57:12,659 --> 00:57:18,118
the good doctors book

1163
00:57:14,969 --> 00:57:20,059
oh geez let let her mention her book and

1164
00:57:18,119 --> 00:57:24,599
the publishers in the various places

1165
00:57:20,059 --> 00:57:27,599
because we have listeners in across the

1166
00:57:24,599 --> 00:57:30,838
United States and Canada and also in

1167
00:57:27,599 --> 00:57:33,359
Great Britain in Sweden and Germany in

1168
00:57:30,838 --> 00:57:35,309
Switzerland in Austria and it's a nice

1169

00:57:33,358 --> 00:57:37,500
new way of looking at things too you

1170
00:57:35,309 --> 00:57:39,779
know it's not the same old same old

1171
00:57:37,500 --> 00:57:41,699
no I think you've actually uncovered in

1172
00:57:39,780 --> 00:57:43,380
very interesting and pretty unique field

1173
00:57:41,699 --> 00:57:44,909
and people should look into it

1174
00:57:43,380 --> 00:57:47,970
and I'm looking forward to your new book

1175
00:57:44,909 --> 00:57:51,769
so I can become a memory palace every

1176
00:57:47,969 --> 00:57:51,769
time I look in the mirror I just

1177
00:57:51,789 --> 00:57:58,490
the book it's the memory code it the if

1178
00:57:56,028 --> 00:58:01,099
anyone wants the academic version

1179
00:57:58,489 --> 00:58:02,929
Cambridge University Press has published

1180
00:58:01,099 --> 00:58:06,849
that as knowledge and power in

1181
00:58:02,929 --> 00:58:06,848
prehistoric societies nice

1182
00:58:06,920 --> 00:58:12,829
so it has a strong academic backing but

1183
00:58:10,670 --> 00:58:14,900

much more readable is the memory code

1184

00:58:12,829 --> 00:58:19,548

published in Australia by Eleanor nun

1185

00:58:14,900 --> 00:58:22,220

one in the US by Pegasus books in the UK

1186

00:58:19,548 --> 00:58:24,559

and Europe by Atlantic books and it's

1187

00:58:22,219 --> 00:58:27,588

available through all book shops Amazon

1188

00:58:24,559 --> 00:58:30,289

and anywhere you want readily available

1189

00:58:27,588 --> 00:58:33,858

and I'd be delighted if your readers

1190

00:58:30,289 --> 00:58:35,630

read it and let me know how they feel do

1191

00:58:33,858 --> 00:58:39,980

you have a website where they contact

1192

00:58:35,630 --> 00:58:42,740

you yes if they just google my name ly

1193

00:58:39,980 --> 00:58:45,170

double any kwy they'll get my website

1194

00:58:42,739 --> 00:58:48,379

straight away okay well thank you so

1195

00:58:45,170 --> 00:58:50,139

much for being our guest and excuse us

1196

00:58:48,380 --> 00:58:53,059

because we have a kind of a

1197

00:58:50,139 --> 00:58:55,548

rough-and-ready conversational style so

1198
00:58:53,059 --> 00:59:01,039
we do interrupt occasionally but with no

1199
00:58:55,548 --> 00:59:03,369
disrespect oh we did - it was great

1200
00:59:01,039 --> 00:59:06,559
speaking to you wish you best of luck

1201
00:59:03,369 --> 00:59:08,180
thank you talk to you after the new book

1202
00:59:06,559 --> 00:59:12,470
comes out oh please do

1203
00:59:08,179 --> 00:59:14,629
thanks Lynn bye-bye okay well that was

1204
00:59:12,469 --> 00:59:17,899
really interesting isn't it yeah I

1205
00:59:14,630 --> 00:59:20,690
really want to make one of those memory

1206
00:59:17,900 --> 00:59:23,298
devices well you know kidding aside with

1207
00:59:20,690 --> 00:59:25,760
the smartphone and you know her thesis

1208
00:59:23,298 --> 00:59:28,210
that the human brain is what's the same

1209
00:59:25,760 --> 00:59:30,680
through the ages and this is why as

1210
00:59:28,210 --> 00:59:32,599
dependent as they were on their memory

1211
00:59:30,679 --> 00:59:34,190
devices people now are dependent on

1212
00:59:32,599 --> 00:59:36,769
their phones I think you're onto

1213
00:59:34,190 --> 00:59:38,960
something there Kate I think so I think

1214
00:59:36,769 --> 00:59:40,909
people are alike whether it's now or a

1215
00:59:38,960 --> 00:59:43,039
hunter-gatherer back fifty thousand

1216
00:59:40,909 --> 00:59:45,618
years ago we all know where to get the

1217
00:59:43,039 --> 00:59:47,569
woolly mammoths mm-hmm I'm looking for

1218
00:59:45,619 --> 00:59:48,289
that woolly mammoth it's in the Museum of

1219
00:59:47,568 --> 00:59:50,929
Natural History

1220
00:59:48,289 --> 00:59:53,510
well 170 seconds when they get that DNA

1221
00:59:50,929 --> 00:59:55,759
from the woolly mammoth and make a new

1222
00:59:53,510 --> 00:59:58,640
one that's what I'm interested in what

1223
00:59:55,760 --> 01:00:02,480
I'd like to ask everybody is to check us

1224
00:59:58,639 --> 01:00:04,039
out on YouTube like us on Facebook let

1225
01:00:02,480 --> 01:00:06,740
us know if you would like to be a

1226

01:00:04,039 --> 01:00:10,099
guest in our listeners corner you can do

1227
01:00:06,739 --> 01:00:12,469
so in writing as well as verbally on the

1228
01:00:10,099 --> 01:00:14,869
actual show you can be a guest at the

1229
01:00:12,469 --> 01:00:18,500
end of the show or you can write the

1230
01:00:14,869 --> 01:00:22,400
stuff down include as much pertinent

1231
01:00:18,500 --> 01:00:25,280
information about your experience and if

1232
01:00:22,400 --> 01:00:27,440
you don't want to actually speak it

1233
01:00:25,280 --> 01:00:30,620
yourself we will read the account of

1234
01:00:27,440 --> 01:00:34,639
your sighting or encounter it can be

1235
01:00:30,619 --> 01:00:37,159
about UFOs orbs beings electronic voice

1236
01:00:34,639 --> 01:00:39,859
phenomena phantoms you name it we want

1237
01:00:37,159 --> 01:00:45,159
to hear at all please feel free to

1238
01:00:39,860 --> 01:00:49,880
comment on either of our websites either

1239
01:00:45,159 --> 01:00:54,379
HTTP colon slash slash shadowed reality

1240
01:00:49,880 --> 01:00:57,619

podcast dot wordpress.com or shattered

1241

01:00:54,380 --> 01:01:00,410

reality podcast comm you can comment on

1242

01:00:57,619 --> 01:01:03,769

either of those sites you can comment on

1243

01:01:00,409 --> 01:01:08,119

our YouTube pages or on our Facebook

1244

01:01:03,769 --> 01:01:13,820

pages we guarantee that you will receive

1245

01:01:08,119 --> 01:01:16,339

a response in short order so we are also

1246

01:01:13,820 --> 01:01:18,980

interested very interested in recent

1247

01:01:16,340 --> 01:01:22,220

accounts of what happened on the

1248

01:01:18,980 --> 01:01:26,360

aircraft carrier Nimitz so stay tuned

1249

01:01:22,219 --> 01:01:28,699

for more adventures about that you want

1250

01:01:26,360 --> 01:01:32,539

to say something no I'm done okay I'm

1251

01:01:28,699 --> 01:01:38,259

good - okay so now yes farewell from

1252

01:01:32,539 --> 01:01:38,259

goodbye from shattered reality

1253

01:01:40,150 --> 01:01:48,530

[Music]

1254

01:02:01,260 --> 01:02:03,320

you

