

The Skeptic Zone

Show 255 - 8 Sept 2013



Dr Colin Wright

1
00:00:23,509 --> 00:00:09,190
welcome to the skeptic zone the podcast

2
00:00:28,630 --> 00:00:25,670
hello and welcome to the skeptic zone

3
00:00:31,589 --> 00:00:28,640
episode number 255

4
00:00:33,270 --> 00:00:31,599
on the 8th of september 2013 richard

5
00:00:34,630 --> 00:00:33,280
saunders here with you from sydney

6
00:00:36,950 --> 00:00:34,640
australia

7
00:00:39,510 --> 00:00:36,960
on today's show on today's show well

8
00:00:41,670 --> 00:00:39,520
recently in the past week in fact

9
00:00:44,310 --> 00:00:41,680
i went to uh visit some friends and give

10
00:00:46,229 --> 00:00:44,320
some talks in melbourne and i was very

11
00:00:49,029 --> 00:00:46,239
lucky at the same time

12
00:00:51,270 --> 00:00:49,039
dr colin wright was visiting now dr

13
00:00:52,869 --> 00:00:51,280

colin wright is a juggler he's a

14

00:00:55,029 --> 00:00:52,879

mathematician

15

00:00:56,790 --> 00:00:55,039

and he's this sort of otherworldly

16

00:00:58,549 --> 00:00:56,800

character who does all sorts of crazy

17

00:01:00,389 --> 00:00:58,559

fun things full of puzzles full of

18

00:01:04,310 --> 00:01:00,399

interesting things

19

00:01:05,590 --> 00:01:04,320

involved with the mathsjam.com

20

00:01:07,910 --> 00:01:05,600

organization

21

00:01:09,670 --> 00:01:07,920

i caught up with dr colin wright

22

00:01:11,590 --> 00:01:09,680

in a cafe in melbourne where he teaches

23

00:01:13,750 --> 00:01:11,600

me a new memory trick

24

00:01:15,670 --> 00:01:13,760

talks about infinity

25

00:01:17,429 --> 00:01:15,680

and infinity

26

00:01:21,190 --> 00:01:17,439

you'll understand soon

27

00:01:23,350 --> 00:01:21,200

juggling mathematics and neckties

28

00:01:25,990 --> 00:01:23,360

and after that it's maynard's spooky

29

00:01:29,109 --> 00:01:26,000

action maynard talks with hubert

30

00:01:31,910 --> 00:01:29,119

vandenberg about his book how to sound

31

00:01:33,749 --> 00:01:31,920

clever master the 600 english words you

32

00:01:35,350 --> 00:01:33,759

pretend to understand

33

00:01:37,510 --> 00:01:35,360

when you don't

34

00:01:40,390 --> 00:01:37,520

that's very interesting for

35

00:01:42,789 --> 00:01:40,400

people in the scientific outlook i

36

00:01:44,310 --> 00:01:42,799

suppose the scientific organization the

37

00:01:46,230 --> 00:01:44,320

industry the what's the word i'm looking

38

00:01:47,990 --> 00:01:46,240

for i'd better read his book

39

00:01:50,149 --> 00:01:48,000

it's always important that you sound

40

00:01:51,670 --> 00:01:50,159

clever yes i think that's very important

41

00:01:53,749 --> 00:01:51,680

anyway that interview is coming up a

42

00:01:56,230 --> 00:01:53,759

little later on in the show

43

00:01:57,910 --> 00:01:56,240

and of course we have the week in signs

44

00:02:03,270 --> 00:01:57,920

from our good friends at the royal

45

00:02:06,789 --> 00:02:04,709

dot a u

46

00:02:09,109 --> 00:02:06,799

and to round off the show one from the

47

00:02:11,270 --> 00:02:09,119

vaults one from the digital audio vaults

48

00:02:14,470 --> 00:02:11,280

i've been looking through recently some

49

00:02:16,790 --> 00:02:14,480

years back i was a guest on sydney radio

50

00:02:19,190 --> 00:02:16,800

with the host mike williams

51
00:02:20,470 --> 00:02:19,200
and we discuss spontaneous human

52
00:02:23,190 --> 00:02:20,480
combustion

53
00:02:25,270 --> 00:02:23,200
and firewalking now some important notes

54
00:02:26,869 --> 00:02:25,280
before we get into the show

55
00:02:28,949 --> 00:02:26,879
a big thank you to my friends in

56
00:02:31,030 --> 00:02:28,959
melbourne at the immortalic skeptics and

57
00:02:32,470 --> 00:02:31,040
the victorian skeptics if you want to

58
00:02:34,470 --> 00:02:32,480
find out more about the victorian

59
00:02:37,670 --> 00:02:34,480
skeptics and the fine work they do visit

60
00:02:40,150 --> 00:02:39,030
i gave a talk down there at the

61
00:02:43,030 --> 00:02:40,160
mordialic

62
00:02:44,790 --> 00:02:43,040
sporting club great turnout thanks for

63
00:02:46,869 --> 00:02:44,800

everybody who came along

64

00:02:49,910 --> 00:02:46,879

and good news for sydney siders

65

00:02:51,750 --> 00:02:49,920

skepticamp is coming up once again

66

00:02:54,390 --> 00:02:51,760

skepticamp at the university of

67

00:02:55,750 --> 00:02:54,400

technology on the uh 12th of october

68

00:02:57,750 --> 00:02:55,760

from 10 a.m

69

00:03:00,070 --> 00:02:57,760

more news about that in the coming weeks

70

00:03:03,110 --> 00:03:00,080

skeptic camp in sydney it's been going

71

00:03:05,830 --> 00:03:03,120

for some years now always a great event

72

00:03:09,350 --> 00:03:05,840

also good news for sydney site is on

73

00:03:11,270 --> 00:03:09,360

sunday the 15th of uh september

74

00:03:14,390 --> 00:03:11,280

so that's sunday a little over a week

75

00:03:16,630 --> 00:03:14,400

away at 5 30 p.m there's a special an

76
00:03:19,190 --> 00:03:16,640
extra special sydney skeptics in the pub

77
00:03:20,949 --> 00:03:19,200
with dr pamela gay now this is going to

78
00:03:24,229 --> 00:03:20,959
be at the crown hotel which is at the

79
00:03:25,430 --> 00:03:24,239
corner of elizabeth and goulburn streets

80
00:03:28,470 --> 00:03:25,440
best thing to do is to visit

81
00:03:33,030 --> 00:03:30,949
and find out more there will be a 10

82
00:03:36,869 --> 00:03:33,040
door fee but all profits will go to

83
00:03:38,229 --> 00:03:36,879
pamela's cosmo quest program

84
00:03:40,710 --> 00:03:38,239
wow i can't wait for that one it's going

85
00:03:42,070 --> 00:03:40,720
to be wonderful to see dr pamela gay

86
00:03:43,910 --> 00:03:42,080
very soon

87
00:03:45,830 --> 00:03:43,920
and another highlight for you lucky

88
00:03:48,229 --> 00:03:45,840

people in sydney on the 28th of

89

00:03:49,430 --> 00:03:48,239

september there's the australian

90

00:03:50,949 --> 00:03:49,440

skeptics

91

00:03:53,030 --> 00:03:50,959

dinner meeting

92

00:03:54,309 --> 00:03:53,040

oh this one's going to be good galit

93

00:03:58,309 --> 00:03:54,319

segev

94

00:04:00,869 --> 00:03:58,319

gives her talk about the science behind

95

00:04:03,190 --> 00:04:00,879

chocolate oh man

96

00:04:05,270 --> 00:04:03,200

oh she she makes this chocolate which is

97

00:04:06,630 --> 00:04:05,280

a combination of blue cheese and dark

98

00:04:08,070 --> 00:04:06,640

chocolate

99

00:04:11,670 --> 00:04:08,080

it's um

100

00:04:14,229 --> 00:04:11,680

it's indescribable it's sensational

101
00:04:16,069 --> 00:04:14,239
more details go to the website but that

102
00:04:18,069 --> 00:04:16,079
didn't talk for you sydney siders get

103
00:04:21,270 --> 00:04:18,079
your tickets while you still can

104
00:04:22,790 --> 00:04:21,280
popular topic on the 28th of september

105
00:04:24,150 --> 00:04:22,800
now when i was in melbourne i was

106
00:04:28,070 --> 00:04:24,160
actually uh

107
00:04:29,909 --> 00:04:28,080
requested by somebody if i could do this

108
00:04:32,150 --> 00:04:29,919
dice thing again i've got my 20-sided

109
00:04:34,150 --> 00:04:32,160
dice i've got a giant one this is huge

110
00:04:36,629 --> 00:04:34,160
this is what i picked up in dragon con

111
00:04:38,310 --> 00:04:36,639
about uh five years ago it's a giant

112
00:04:40,230 --> 00:04:38,320
20-sided die

113
00:04:42,790 --> 00:04:40,240

all right everybody here we go it's that

114

00:04:44,230 --> 00:04:42,800

time again think of a number

115

00:04:45,670 --> 00:04:44,240

one two three four five all the way to

116

00:04:47,670 --> 00:04:45,680

twenty are you thinking let's see how

117

00:04:51,270 --> 00:04:47,680

good you are predicting

118

00:04:54,070 --> 00:04:52,710

fifteen

119

00:04:56,550 --> 00:04:54,080

and with that thought in my head i'm

120

00:04:58,629 --> 00:04:56,560

gonna run downstairs see if i have any

121

00:05:21,590 --> 00:04:58,639

blue cheese and crackers while we all

122

00:05:21,600 --> 00:05:28,710

those are the days

123

00:05:31,990 --> 00:05:30,629

dr steve roberts is of course whinging

124

00:05:34,150 --> 00:05:32,000

about the good old days for the berlin

125

00:05:36,469 --> 00:05:34,160

wall folks yeah we had tanks and pointed

126

00:05:38,790 --> 00:05:36,479

guns at each other and somebody sneezes

127

00:05:40,230 --> 00:05:38,800

actually sorry maybe something goes

128

00:05:42,629 --> 00:05:40,240

flying over the wall

129

00:05:44,870 --> 00:05:42,639

oh those are the days of it i'm sitting

130

00:05:47,510 --> 00:05:44,880

here with dr colin wright who i met in

131

00:05:49,350 --> 00:05:47,520

qed twice now twice now twice now good

132

00:05:51,430 --> 00:05:49,360

to catch up here we i'm in melbourne to

133

00:05:53,270 --> 00:05:51,440

give some talks and you're in town at

134

00:05:56,469 --> 00:05:53,280

the same time happen to be visiting my

135

00:05:58,310 --> 00:05:56,479

parents from the uk so uh yeah so

136

00:06:00,310 --> 00:05:58,320

managed to catch up with you which is a

137

00:06:02,629 --> 00:06:00,320

a bit of an added bonus we've had a good

138

00:06:04,070 --> 00:06:02,639

day went to in big and books yeah yes

139

00:06:04,950 --> 00:06:04,080

and found a book that i wanted actually

140

00:06:06,629 --> 00:06:04,960

i found

141

00:06:09,270 --> 00:06:06,639

30 books i wanted but i can't ship them

142

00:06:11,590 --> 00:06:09,280

all back to the uk so i only bought one

143

00:06:14,390 --> 00:06:11,600

very restrained which book did you buy i

144

00:06:17,029 --> 00:06:14,400

think i bought um one by terry pratchett

145

00:06:19,189 --> 00:06:17,039

on uh on poo actually

146

00:06:21,189 --> 00:06:19,199

on poo yeah not poo bear

147

00:06:23,189 --> 00:06:21,199

but uh but who in one of terry

148

00:06:25,430 --> 00:06:23,199

pratchett's books a young lad is it

149

00:06:28,870 --> 00:06:25,440

becomes very fascinated with animals and

150

00:06:30,230 --> 00:06:28,880

their products oh one of which is is poo

151
00:06:32,070 --> 00:06:30,240
but we haven't read the book yet so i

152
00:06:40,950 --> 00:06:32,080
don't exactly know what it's about it's

153
00:06:45,270 --> 00:06:43,270
now why don't you uh

154
00:06:47,189 --> 00:06:45,280
tell our audience once again remind them

155
00:06:49,189 --> 00:06:47,199
about the fabulous maths opportunity

156
00:06:51,909 --> 00:06:49,199
that awaits them all around the world oh

157
00:06:53,830 --> 00:06:51,919
the maths jam yeah maths jam math jam is

158
00:06:56,469 --> 00:06:53,840
a movement sort of thing that uh matt

159
00:06:57,990 --> 00:06:56,479
parker started in london he uh he got

160
00:07:00,309 --> 00:06:58,000
together with a few friends one evening

161
00:07:01,510 --> 00:07:00,319
and and they started swapping puzzles

162
00:07:03,830 --> 00:07:01,520
and at the end of the evening said that

163
00:07:05,830 --> 00:07:03,840

they had such a good time they just had

164

00:07:07,510 --> 00:07:05,840

to do it again and as you can imagine

165

00:07:09,749 --> 00:07:07,520

normally when you say something like

166

00:07:11,029 --> 00:07:09,759

that nothing ever happens but somebody

167

00:07:12,629 --> 00:07:11,039

pulled out their diary and said well how

168

00:07:15,110 --> 00:07:12,639

about next month and so they ended up

169

00:07:17,430 --> 00:07:15,120

meeting on the second last tuesday of

170

00:07:20,150 --> 00:07:17,440

the month in this london pub swapping

171

00:07:22,230 --> 00:07:20,160

puzzles and tricks and games and just

172

00:07:24,550 --> 00:07:22,240

talking about maths generally but not

173

00:07:26,870 --> 00:07:24,560

sort of deep academic math but

174

00:07:28,469 --> 00:07:26,880

recreational math that's where you've

175

00:07:31,270 --> 00:07:28,479

got puzzles

176

00:07:33,189 --> 00:07:31,280

yeah exactly so exactly so and uh so

177

00:07:34,790 --> 00:07:33,199

other people started to do this so

178

00:07:38,150 --> 00:07:34,800

people in manchester are doing in fact

179

00:07:40,230 --> 00:07:38,160

there are about 14 places in the uk but

180

00:07:42,309 --> 00:07:40,240

there's also a meeting here in melbourne

181

00:07:44,150 --> 00:07:42,319

uh second last tuesday of the month

182

00:07:45,909 --> 00:07:44,160

seven o'clock and uh do you know where

183

00:07:48,070 --> 00:07:45,919

they meet i think that the bull and bear

184

00:07:48,950 --> 00:07:48,080

in flinders lane you know what that is i

185

00:07:51,510 --> 00:07:48,960

don't know

186

00:07:53,589 --> 00:07:51,520

no but it's a very easy to find uh

187

00:07:56,309 --> 00:07:53,599

there's a meeting that comes and goes in

188

00:07:58,309 --> 00:07:56,319

perth but there's a couple in the us and

189

00:08:00,950 --> 00:07:58,319

um there's a one in portugal and a few

190

00:08:02,790 --> 00:08:00,960

around but there's also the annual maths

191

00:08:05,830 --> 00:08:02,800

jam meeting which is coming up on the

192

00:08:08,629 --> 00:08:05,840

first weekend of november in the uk

193

00:08:10,710 --> 00:08:08,639

that's a full weekend of people getting

194

00:08:13,350 --> 00:08:10,720

together and just talking about

195

00:08:14,950 --> 00:08:13,360

recreational maths and puzzles and games

196

00:08:17,270 --> 00:08:14,960

and stuff like that

197

00:08:19,189 --> 00:08:17,280

wow wow any

198

00:08:21,430 --> 00:08:19,199

keen entrepreneur out there would go

199

00:08:23,909 --> 00:08:21,440

along and make lots of notes for a book

200

00:08:25,990 --> 00:08:23,919

i could certainly do that although we do

201
00:08:28,390 --> 00:08:26,000
have some rules oh yes yeah the first

202
00:08:30,150 --> 00:08:28,400
rule is that you're there to share

203
00:08:32,709 --> 00:08:30,160
so if somebody's there and just making

204
00:08:33,990 --> 00:08:32,719
notes that it will be noted and they you

205
00:08:36,389 --> 00:08:34,000
know somebody will come up to them and

206
00:08:39,190 --> 00:08:36,399
say well yeah show us something then

207
00:08:40,469 --> 00:08:39,200
but it's never happened yet um so we we

208
00:08:42,870 --> 00:08:40,479
don't really know what we'll do if

209
00:08:45,670 --> 00:08:42,880
somebody does that but there's

210
00:08:47,910 --> 00:08:45,680
people there are keen on sharing what

211
00:08:49,750 --> 00:08:47,920
they know uh keen on showing people

212
00:08:52,070 --> 00:08:49,760
things that are new and then learning

213
00:08:53,910 --> 00:08:52,080

things in return because everybody just

214

00:08:56,630 --> 00:08:53,920

wants to enthuse about this subject is

215

00:08:58,550 --> 00:08:56,640

the ideal place second rule by the way

216

00:09:00,070 --> 00:08:58,560

uh is that you have to enjoy yourself

217

00:09:01,670 --> 00:09:00,080

yeah so if you see something that if you

218

00:09:03,350 --> 00:09:01,680

see something that's wrong then just go

219

00:09:05,110 --> 00:09:03,360

and fix it don't moan about it just fix

220

00:09:07,030 --> 00:09:05,120

it and the third rule is that if

221

00:09:09,030 --> 00:09:07,040

somebody else is enjoying themselves

222

00:09:10,870 --> 00:09:09,040

you're not allowed to stop them

223

00:09:12,310 --> 00:09:10,880

so if you know the answer to a puzzle

224

00:09:14,230 --> 00:09:12,320

that they're working on

225

00:09:15,990 --> 00:09:14,240

you can go and be smug

226

00:09:17,990 --> 00:09:16,000

about it grin away but you're not

227

00:09:19,990 --> 00:09:18,000

allowed to give them a hint right unless

228

00:09:21,829 --> 00:09:20,000

they explicitly ask you for it no

229

00:09:23,590 --> 00:09:21,839

spoilers no spoilers absolutely no

230

00:09:25,269 --> 00:09:23,600

spoilers so if they come up and say look

231

00:09:27,269 --> 00:09:25,279

i'm really stuck on this give me a hint

232

00:09:28,790 --> 00:09:27,279

then that's fine but if they're working

233

00:09:30,710 --> 00:09:28,800

on it for some of them that's their

234

00:09:32,870 --> 00:09:30,720

enjoyment that's the way they love to

235

00:09:34,230 --> 00:09:32,880

spend time doing this so so you're not

236

00:09:35,910 --> 00:09:34,240

allowed to spoil somebody else's

237

00:09:37,590 --> 00:09:35,920

enjoyment this is the fourth one we've

238

00:09:39,190 --> 00:09:37,600

had and so far they've been great

239

00:09:41,430 --> 00:09:39,200

success the fourth annual the fourth

240

00:09:43,269 --> 00:09:41,440

annual wow yeah so uh the maths jams

241

00:09:45,269 --> 00:09:43,279

have been running for about uh five and

242

00:09:47,590 --> 00:09:45,279

a half years now the uh the monthly

243

00:09:49,430 --> 00:09:47,600

meetings uh so we've started up the

244

00:09:50,949 --> 00:09:49,440

annual gathering just sort of a

245

00:09:53,110 --> 00:09:50,959

reflection of the gathering for gardener

246

00:09:55,590 --> 00:09:53,120

which is a similar thing in the us and

247

00:09:58,230 --> 00:09:55,600

the uh colloquium of recreational maths

248

00:10:00,630 --> 00:09:58,240

which is run in portugal every two years

249

00:10:02,470 --> 00:10:00,640

so gathering for gardiner recreational

250

00:10:04,790 --> 00:10:02,480

maths colloquium they bounce back and

251
00:10:07,030 --> 00:10:04,800
forth every two years each and the math

252
00:10:09,030 --> 00:10:07,040
jam sort of sits between those

253
00:10:10,710 --> 00:10:09,040
and where can people uh go to find out

254
00:10:13,350 --> 00:10:10,720
more about matt's channel oh

255
00:10:15,430 --> 00:10:13,360
www.mathsjam.com

256
00:10:17,910 --> 00:10:15,440
that's difficult

257
00:10:20,069 --> 00:10:17,920
you told me something earlier today

258
00:10:22,470 --> 00:10:20,079
and we worked out my bacon number by

259
00:10:24,630 --> 00:10:22,480
doing this

260
00:10:26,470 --> 00:10:24,640
i have a bacon number of two yeah with

261
00:10:27,829 --> 00:10:26,480
hugh jackman that's right you google

262
00:10:30,310 --> 00:10:27,839
that everybody

263
00:10:32,150 --> 00:10:30,320

um oh we're in a cafe against the cafe

264

00:10:35,750 --> 00:10:32,160

sound effects you here in the background

265

00:10:37,829 --> 00:10:35,760

but you tell me a way of a memory trick

266

00:10:41,030 --> 00:10:37,839

oh yeah just if you want to remember

267

00:10:42,630 --> 00:10:41,040

something and it's just this random fact

268

00:10:45,190 --> 00:10:42,640

that's not connected to anything else

269

00:10:46,949 --> 00:10:45,200

usually you can connect something into

270

00:10:48,870 --> 00:10:46,959

something else you already know to

271

00:10:50,550 --> 00:10:48,880

create a pattern or a structure which

272

00:10:52,470 --> 00:10:50,560

helps you remember it which is the way

273

00:10:54,150 --> 00:10:52,480

memory champions do this sort of thing

274

00:10:56,389 --> 00:10:54,160

but there's a technique known as space

275

00:10:59,430 --> 00:10:56,399

repetition space repetitive spaced

276

00:11:02,470 --> 00:10:59,440

repetition spaced yeah space right yeah

277

00:11:05,590 --> 00:11:02,480

so uh you think to yourself okay um

278

00:11:07,269 --> 00:11:05,600

random fact uh about something uh got no

279

00:11:09,030 --> 00:11:07,279

idea really hopeless at pulling these

280

00:11:10,630 --> 00:11:09,040

things out you know i equals three point

281

00:11:12,389 --> 00:11:10,640

one four one five nine two six five

282

00:11:14,389 --> 00:11:12,399

three five so you you just write that

283

00:11:16,310 --> 00:11:14,399

down and you look at it you think okay

284

00:11:17,910 --> 00:11:16,320

try and remember it close my eyes recite

285

00:11:19,990 --> 00:11:17,920

it try and remember it put it down and

286

00:11:22,150 --> 00:11:20,000

then one minute later

287

00:11:23,670 --> 00:11:22,160

try to recall it okay and if you do

288

00:11:25,509 --> 00:11:23,680

reasonably if you don't do reasonably

289

00:11:27,190 --> 00:11:25,519

well then one minute after that do it

290

00:11:29,190 --> 00:11:27,200

again right so you do it at one minute

291

00:11:30,550 --> 00:11:29,200

spacing until you've remembered it for

292

00:11:32,710 --> 00:11:30,560

that and then

293

00:11:34,949 --> 00:11:32,720

put it off to two minutes spacing so

294

00:11:36,710 --> 00:11:34,959

double the the and then if you if you do

295

00:11:39,110 --> 00:11:36,720

reasonably well then go out to five

296

00:11:41,990 --> 00:11:39,120

minutes and go out to ten minutes each

297

00:11:43,990 --> 00:11:42,000

time more or less doubling the gap and

298

00:11:46,630 --> 00:11:44,000

if you find that you falter then keep it

299

00:11:48,470 --> 00:11:46,640

at that gap until you're okay and then

300

00:11:50,949 --> 00:11:48,480

start doubling the gap again and it

301
00:11:53,509 --> 00:11:50,959
doesn't take very many doublings to have

302
00:11:54,949 --> 00:11:53,519
it one day apart so just pull it out and

303
00:11:56,949 --> 00:11:54,959
look at it in the morning to refresh

304
00:11:59,110 --> 00:11:56,959
your memory you do that two days in a

305
00:12:01,030 --> 00:11:59,120
row and then do it later in that week

306
00:12:03,110 --> 00:12:01,040
and then do it the next week and you

307
00:12:04,710 --> 00:12:03,120
suddenly find that it's a month before

308
00:12:07,829 --> 00:12:04,720
you need to remind you you just pull it

309
00:12:09,750 --> 00:12:07,839
out yeah if you never use it you need to

310
00:12:12,069 --> 00:12:09,760
keep refreshing it at sort of one month

311
00:12:14,230 --> 00:12:12,079
notice or two months notice but if you

312
00:12:15,670 --> 00:12:14,240
use it once a month there you are you

313
00:12:17,910 --> 00:12:15,680

already got it

314

00:12:18,870 --> 00:12:17,920

often enough that it's keeping it fresh

315

00:12:21,030 --> 00:12:18,880

enough

316

00:12:23,509 --> 00:12:21,040

and it's just a great technique for

317

00:12:26,470 --> 00:12:23,519

memorizing stuff so

318

00:12:29,190 --> 00:12:26,480

my wife and i memorize poetry like this

319

00:12:31,910 --> 00:12:29,200

uh you can remember uh theorems for

320

00:12:34,150 --> 00:12:31,920

exams you can remember bits of prose you

321

00:12:35,910 --> 00:12:34,160

can remember magic tricks bits of

322

00:12:38,310 --> 00:12:35,920

manipulation anything you need to

323

00:12:40,389 --> 00:12:38,320

remember so it's not just memorizing a

324

00:12:42,389 --> 00:12:40,399

sequence of words so to speak like a

325

00:12:44,069 --> 00:12:42,399

poem or a theorem or something but a

326

00:12:47,030 --> 00:12:44,079

technique yeah

327

00:12:49,430 --> 00:12:47,040

and spaced repetition is a technique to

328

00:12:51,350 --> 00:12:49,440

memorize anything that you can keep with

329

00:12:53,430 --> 00:12:51,360

a bit of practice it helps you to

330

00:12:55,670 --> 00:12:53,440

practice it often enough

331

00:12:57,269 --> 00:12:55,680

so practice it now and again then double

332

00:12:59,590 --> 00:12:57,279

the spacing practice it again you should

333

00:13:00,710 --> 00:12:59,600

try that with origami yeah no i mean you

334

00:13:02,069 --> 00:13:00,720

i'm sure you'll find that there are

335

00:13:03,990 --> 00:13:02,079

things that you've folded yeah that

336

00:13:06,389 --> 00:13:04,000

you've forgotten

337

00:13:08,389 --> 00:13:06,399

there are many yeah many someone will

338

00:13:10,069 --> 00:13:08,399

say to me oh can you make this i thought

339

00:13:12,150 --> 00:13:10,079

great i get a bit of paper out and i

340

00:13:12,949 --> 00:13:12,160

thought what do i do next yeah because

341

00:13:14,550 --> 00:13:12,959

my

342

00:13:15,910 --> 00:13:14,560

it's been a long time since i've made it

343

00:13:17,590 --> 00:13:15,920

there are some things which actually i

344

00:13:19,910 --> 00:13:17,600

can make after 20 years because they're

345

00:13:21,750 --> 00:13:19,920

so ingrained in my head but there are a

346

00:13:23,269 --> 00:13:21,760

number of things that i have to quickly

347

00:13:25,269 --> 00:13:23,279

refer back to my notes i never mind

348

00:13:27,590 --> 00:13:25,279

doing that no but it's more fun to do it

349

00:13:28,870 --> 00:13:27,600

just if you can do it just on the fly

350

00:13:29,990 --> 00:13:28,880

it's the same with juggling patterns

351
00:13:31,509 --> 00:13:30,000
people will come to me and say can you

352
00:13:33,430 --> 00:13:31,519
juggle this can you juggle this and i'll

353
00:13:35,350 --> 00:13:33,440
go yeah and then i get pick up the balls

354
00:13:37,829 --> 00:13:35,360
my body just won't do it

355
00:13:39,190 --> 00:13:37,839
so if you have a list of things uh start

356
00:13:40,629 --> 00:13:39,200
with one of them practice it sort of

357
00:13:42,310 --> 00:13:40,639
every five minutes every 10 minutes

358
00:13:43,829 --> 00:13:42,320
every hour and then then you find that

359
00:13:45,350 --> 00:13:43,839
you've largely got that under control

360
00:13:46,230 --> 00:13:45,360
but you need to come back to it the next

361
00:13:47,829 --> 00:13:46,240
day

362
00:13:49,030 --> 00:13:47,839
and so it is that you can start to build

363
00:13:51,190 --> 00:13:49,040

up your repertoire as long as you

364

00:13:53,350 --> 00:13:51,200

revisit your repertoire often enough and

365

00:13:54,790 --> 00:13:53,360

when you want to get a new one to add to

366

00:13:56,470 --> 00:13:54,800

it well first of all you've got your

367

00:13:58,069 --> 00:13:56,480

body of experience which will help you

368

00:13:59,430 --> 00:13:58,079

yeah but do it once do it again

369

00:14:01,110 --> 00:13:59,440

immediately do it again a little bit

370

00:14:03,110 --> 00:14:01,120

later get distracted by conversation do

371

00:14:05,750 --> 00:14:03,120

it again 10 minutes later and come back

372

00:14:08,790 --> 00:14:05,760

to it with increasing gaps

373

00:14:11,030 --> 00:14:08,800

repeating them at a spacing that

374

00:14:13,430 --> 00:14:11,040

increases but a spaced repetition where

375

00:14:14,949 --> 00:14:13,440

did you um it's all over i don't

376

00:14:17,509 --> 00:14:14,959

remember reading about it it's all over

377

00:14:19,269 --> 00:14:17,519

here you can find it

378

00:14:20,949 --> 00:14:19,279

knowing that didn't work because i you

379

00:14:22,790 --> 00:14:20,959

know once i've got the technique

380

00:14:24,949 --> 00:14:22,800

yeah i should i should do more to

381

00:14:26,790 --> 00:14:24,959

remember where i find things that's a

382

00:14:28,389 --> 00:14:26,800

really bad thing that i do to forget

383

00:14:30,150 --> 00:14:28,399

where i find things i should remember

384

00:14:31,509 --> 00:14:30,160

you found it

385

00:14:33,269 --> 00:14:31,519

it works brilliantly it works

386

00:14:34,949 --> 00:14:33,279

brilliantly yeah i've remembered a

387

00:14:37,110 --> 00:14:34,959

couple of poems using this technique

388

00:14:39,189 --> 00:14:37,120

some some mathematics some tricks some

389

00:14:41,189 --> 00:14:39,199

some puzzles uh it just works

390

00:14:42,150 --> 00:14:41,199

brilliantly well when i meet people i

391

00:14:43,590 --> 00:14:42,160

try

392

00:14:45,910 --> 00:14:43,600

although i meet so many people it's very

393

00:14:47,590 --> 00:14:45,920

difficult but uh you look at the face

394

00:14:50,069 --> 00:14:47,600

and you look at something on the face

395

00:14:51,990 --> 00:14:50,079

and you associate the name and

396

00:14:53,590 --> 00:14:52,000

and you try to make that click i started

397

00:14:54,949 --> 00:14:53,600

a new job once many years ago and i

398

00:14:57,509 --> 00:14:54,959

tried that technique with everybody in

399

00:14:59,269 --> 00:14:57,519

the office and it worked like yeah just

400

00:15:00,629 --> 00:14:59,279

worked it just it's just a matter of

401
00:15:02,069 --> 00:15:00,639
making sure you do that when you meet

402
00:15:03,590 --> 00:15:02,079
someone yeah it's also a problem though

403
00:15:05,350 --> 00:15:03,600
sometimes if you if you think oh this

404
00:15:06,870 --> 00:15:05,360
person's got a big nose and so i

405
00:15:08,629 --> 00:15:06,880
remember

406
00:15:11,030 --> 00:15:08,639
his name is a it's a big name his name

407
00:15:12,629 --> 00:15:11,040
is bartholomew it starts with a b and of

408
00:15:14,389 --> 00:15:12,639
course you meet by following me again

409
00:15:15,350 --> 00:15:14,399
you think big nose big nose big nose

410
00:15:17,350 --> 00:15:15,360
hole

411
00:15:19,990 --> 00:15:17,360
what is the name

412
00:15:22,310 --> 00:15:20,000
so it's difficult sometimes to to move

413
00:15:23,670 --> 00:15:22,320

from the mnemonic to the name so you do

414

00:15:25,430 --> 00:15:23,680

need to be a little bit careful

415

00:15:26,710 --> 00:15:25,440

something now how can people in the uk

416

00:15:28,710 --> 00:15:26,720

because that's where you're based out

417

00:15:30,790 --> 00:15:28,720

when they um catch your your juggling

418

00:15:33,350 --> 00:15:30,800

act or your talks well if you actually

419

00:15:35,269 --> 00:15:33,360

just google for my name colin wright

420

00:15:37,350 --> 00:15:35,279

juggling that will do for you or colin

421

00:15:38,870 --> 00:15:37,360

wright maths that will do colin writes a

422

00:15:40,310 --> 00:15:38,880

fairly common name so there are quite a

423

00:15:42,550 --> 00:15:40,320

lot of other people including some

424

00:15:44,949 --> 00:15:42,560

people with big internet presences so if

425

00:15:53,110 --> 00:15:44,959

you just add juggling or maths on that

426

00:15:56,550 --> 00:15:54,389

co dot solipsis.com.uksolipsys.co.uk

427

00:15:58,389 --> 00:15:56,560

um but googling for me is the easiest

428

00:16:00,230 --> 00:15:58,399

thing because not only do you

429

00:16:01,829 --> 00:16:00,240

give talks on mathematics and juggling

430

00:16:04,310 --> 00:16:01,839

but you give general mathematics talks

431

00:16:06,949 --> 00:16:04,320

anyway absolutely i do around about 120

432

00:16:08,550 --> 00:16:06,959

talks a year and only 70 or 80 of them

433

00:16:11,030 --> 00:16:08,560

are on juggling the other ones are on

434

00:16:13,829 --> 00:16:11,040

things like topology or infinity or

435

00:16:15,910 --> 00:16:13,839

getting lost in 2000 dimensions or the

436

00:16:18,310 --> 00:16:15,920

physics of radar and then you tell me

437

00:16:20,389 --> 00:16:18,320

that there's more than one

438

00:16:22,310 --> 00:16:20,399

infinity there's more than one size of

439

00:16:24,230 --> 00:16:22,320

infinity but there's also more than one

440

00:16:26,470 --> 00:16:24,240

type of infinity because there's more

441

00:16:28,389 --> 00:16:26,480

than one type of counting we can we can

442

00:16:30,470 --> 00:16:28,399

count things in how many there are one

443

00:16:32,470 --> 00:16:30,480

two three four but we can also count

444

00:16:35,030 --> 00:16:32,480

where things are in line first second

445

00:16:37,590 --> 00:16:35,040

third fourth yeah and if you try and

446

00:16:39,910 --> 00:16:37,600

push that to extremes

447

00:16:42,069 --> 00:16:39,920

and think about uh infinity you can talk

448

00:16:44,150 --> 00:16:42,079

about how many things there are in a sac

449

00:16:46,389 --> 00:16:44,160

yes but there's also a model of

450

00:16:48,230 --> 00:16:46,399

arithmetic in infinity where it matters

451

00:16:50,069 --> 00:16:48,240

which order they come in

452

00:16:52,310 --> 00:16:50,079

so if you imagine having an infinitely

453

00:16:53,350 --> 00:16:52,320

line collect an infinitely long line of

454

00:16:54,790 --> 00:16:53,360

things like

455

00:16:56,710 --> 00:16:54,800

just the numbers themselves north one

456

00:16:58,470 --> 00:16:56,720

two three four five and look at it from

457

00:17:00,230 --> 00:16:58,480

a distance it's a great long line of

458

00:17:02,389 --> 00:17:00,240

beads stretching off into the distance

459

00:17:04,470 --> 00:17:02,399

further than you can see yes okay now if

460

00:17:06,470 --> 00:17:04,480

you put one on the front yeah let's just

461

00:17:08,789 --> 00:17:06,480

call that omega little omega yeah like a

462

00:17:11,270 --> 00:17:08,799

curly w so that's omega if you put one

463

00:17:13,189 --> 00:17:11,280

on the front if you take one plus omega

464

00:17:15,669 --> 00:17:13,199

but look at it from a distance

465

00:17:17,590 --> 00:17:15,679

it still looks the same yeah right but

466

00:17:20,309 --> 00:17:17,600

if you put one at the other end

467

00:17:21,829 --> 00:17:20,319

if you take omega plus one yeah now it

468

00:17:23,429 --> 00:17:21,839

looks different because there's

469

00:17:24,390 --> 00:17:23,439

something that's bigger than everything

470

00:17:31,350 --> 00:17:24,400

else

471

00:17:34,390 --> 00:17:32,470

is this is the kind of thing where

472

00:17:36,950 --> 00:17:34,400

there's actually an entire year

473

00:17:38,710 --> 00:17:36,960

university course on uh arithmetic

474

00:17:41,029 --> 00:17:38,720

beyond the infinite trans-finite

475

00:17:42,630 --> 00:17:41,039

arithmetic but if you if you keep the

476

00:17:44,549 --> 00:17:42,640

ordering of things

477

00:17:46,789 --> 00:17:44,559

and then try and say well i want to work

478

00:17:49,110 --> 00:17:46,799

with infinity what happens you get a

479

00:17:50,630 --> 00:17:49,120

different arithmetic than if you just

480

00:17:51,909 --> 00:17:50,640

talk about how many things there are in

481

00:17:53,110 --> 00:17:51,919

this sack

482

00:17:54,630 --> 00:17:53,120

because if there's this collection of

483

00:17:56,630 --> 00:17:54,640

things in a second you chuck one in you

484

00:17:58,070 --> 00:17:56,640

can't tell the difference you take two

485

00:17:59,510 --> 00:17:58,080

sacks with infinitely many things and

486

00:18:00,630 --> 00:17:59,520

mix them up you can't tell the

487

00:18:02,710 --> 00:18:00,640

difference

488

00:18:05,590 --> 00:18:02,720

so it's difficult to get a bigger

489

00:18:08,070 --> 00:18:05,600

infinity but you can do it uh and a guy

490

00:18:11,190 --> 00:18:08,080

called girdle in the early 1900s did

491

00:18:14,230 --> 00:18:11,200

that uh actually late 1800s did the

492

00:18:15,909 --> 00:18:14,240

primary work on it 1870s did that but

493

00:18:18,630 --> 00:18:15,919

it's fascinating area utterly

494

00:18:20,549 --> 00:18:18,640

mind-blowing and it turns out to be

495

00:18:23,590 --> 00:18:20,559

surprisingly useful

496

00:18:25,190 --> 00:18:23,600

as a way of dealing with things above

497

00:18:26,870 --> 00:18:25,200

the level of detail

498

00:18:28,230 --> 00:18:26,880

so when you deal with pictures you want

499

00:18:30,390 --> 00:18:28,240

to imagine that that's perfectly

500

00:18:32,390 --> 00:18:30,400

continuous and only afterwards come to

501
00:18:34,470 --> 00:18:32,400
the pixel version

502
00:18:36,630 --> 00:18:34,480
where you've got little cells of color

503
00:18:38,150 --> 00:18:36,640
so it's discrete there's a finite number

504
00:18:39,750 --> 00:18:38,160
of them so you want to start by

505
00:18:42,070 --> 00:18:39,760
pretending there's infinitely many

506
00:18:43,750 --> 00:18:42,080
pixels and when you do the mathematics

507
00:18:46,310 --> 00:18:43,760
of image analysis and image

508
00:18:47,669 --> 00:18:46,320
transformations you pretend that it's

509
00:18:50,150 --> 00:18:47,679
continuous

510
00:18:53,110 --> 00:18:50,160
it's not pixelated and you can do your

511
00:18:54,950 --> 00:18:53,120
analysis there and it's much easier and

512
00:18:57,190 --> 00:18:54,960
only later turn it into the pixel

513
00:18:58,310 --> 00:18:57,200

version so this mathematics of the

514

00:18:59,990 --> 00:18:58,320

infinite

515

00:19:02,390 --> 00:19:00,000

seems like it's just never going to be

516

00:19:04,630 --> 00:19:02,400

useful but it turns out that it is it's

517

00:19:06,630 --> 00:19:04,640

the bizarre thing about math is it turns

518

00:19:09,270 --> 00:19:06,640

out to be useful in unexpected places in

519

00:19:10,870 --> 00:19:09,280

unexpected ways so juggling eh so

520

00:19:12,549 --> 00:19:10,880

juggling yeah

521

00:19:14,390 --> 00:19:12,559

no exactly we found new juggling

522

00:19:16,070 --> 00:19:14,400

patterns because of mathematics it's

523

00:19:18,150 --> 00:19:16,080

it's just bizarre the way mathematics

524

00:19:19,750 --> 00:19:18,160

will turn up in in strange places now

525

00:19:21,990 --> 00:19:19,760

also i i

526

00:19:24,789 --> 00:19:22,000

really enjoyed your talk on juggling

527

00:19:26,950 --> 00:19:24,799

which i saw online and i would imagine

528

00:19:28,870 --> 00:19:26,960

that uh our listeners are welcome to

529

00:19:30,549 --> 00:19:28,880

google that up absolutely there's

530

00:19:31,990 --> 00:19:30,559

several versions of it

531

00:19:33,510 --> 00:19:32,000

on youtube on youtube if you look for

532

00:19:35,590 --> 00:19:33,520

colin wright and juggling you see his

533

00:19:38,549 --> 00:19:35,600

whole presentation i watched it a couple

534

00:19:40,310 --> 00:19:38,559

of weeks ago or a couple of months ago

535

00:19:42,390 --> 00:19:40,320

i guess after we met the second time in

536

00:19:44,230 --> 00:19:42,400

the uk this year when i came home i i

537

00:19:46,710 --> 00:19:44,240

looked that up and i was transfixed it

538

00:19:47,669 --> 00:19:46,720

was it's a funny show but it's

539

00:19:49,669 --> 00:19:47,679

the most

540

00:19:51,029 --> 00:19:49,679

interesting uh

541

00:19:53,510 --> 00:19:51,039

way that

542

00:19:55,270 --> 00:19:53,520

juggling can be described with the beats

543

00:19:57,029 --> 00:19:55,280

and the measures and the yeah this is

544

00:19:59,990 --> 00:19:57,039

fascinating i mean i what i've done is

545

00:20:01,669 --> 00:20:00,000

i've taken one way of simplifying the

546

00:20:03,270 --> 00:20:01,679

juggling because there's just so much

547

00:20:06,070 --> 00:20:03,280

you can do in juggling with warping the

548

00:20:08,070 --> 00:20:06,080

timing throwing from strange places all

549

00:20:10,549 --> 00:20:08,080

these different objects more than that

550

00:20:12,310 --> 00:20:10,559

absolutely so so what what we did was we

551
00:20:14,710 --> 00:20:12,320
said well it's impossible to describe

552
00:20:17,510 --> 00:20:14,720
we've got notations for music for dance

553
00:20:19,110 --> 00:20:17,520
for right for language uh we wanted a

554
00:20:21,430 --> 00:20:19,120
notation for juggling but there's just

555
00:20:23,350 --> 00:20:21,440
so much it's so complicated you can't

556
00:20:26,070 --> 00:20:23,360
get everything all at once so he said

557
00:20:28,549 --> 00:20:26,080
let's go really really simply let's not

558
00:20:31,270 --> 00:20:28,559
walk the timing let's not do cool funky

559
00:20:32,870 --> 00:20:31,280
rhythms let's just fix metronomic beats

560
00:20:34,789 --> 00:20:32,880
let's only do it with two hands let's

561
00:20:35,750 --> 00:20:34,799
have the hands taking it in turns all

562
00:20:38,470 --> 00:20:35,760
the time

563
00:20:42,149 --> 00:20:38,480

and as when you do that it becomes quite

564

00:20:43,750 --> 00:20:42,159

straightforward to enumerate completely

565

00:20:45,430 --> 00:20:43,760

all of the different

566

00:20:46,549 --> 00:20:45,440

repetitive patterns there are in

567

00:20:47,990 --> 00:20:46,559

juggling

568

00:20:49,350 --> 00:20:48,000

and it turned out that there was some we

569

00:20:51,590 --> 00:20:49,360

didn't know

570

00:20:53,750 --> 00:20:51,600

and juggling's been around for thousands

571

00:20:56,230 --> 00:20:53,760

of years and yet because we started this

572

00:20:57,669 --> 00:20:56,240

this modeling method we found uh new

573

00:20:58,870 --> 00:20:57,679

patterns that nobody had ever done

574

00:21:00,070 --> 00:20:58,880

before

575

00:21:01,669 --> 00:21:00,080

so we thought there's got to be maths

576

00:21:03,270 --> 00:21:01,679

underneath this to do it and sure enough

577

00:21:04,870 --> 00:21:03,280

there's some really cool stuff going on

578

00:21:06,630 --> 00:21:04,880

underneath so you know when i saw that

579

00:21:09,669 --> 00:21:06,640

and i saw the diagrams that you created

580

00:21:11,510 --> 00:21:09,679

it reminded me of um shoelaces oh yeah

581

00:21:12,710 --> 00:21:11,520

shoelace toy and actually there's a

582

00:21:15,669 --> 00:21:12,720

great book on

583

00:21:17,510 --> 00:21:15,679

the 85 ways to tie a tie

584

00:21:19,029 --> 00:21:17,520

so a couple of guys did exactly the same

585

00:21:21,590 --> 00:21:19,039

thing you know do you do you pass the

586

00:21:23,350 --> 00:21:21,600

loose end over the top or put it through

587

00:21:24,470 --> 00:21:23,360

the middle yeah and if you put it

588

00:21:26,789 --> 00:21:24,480

through the middle you can then bring it

589

00:21:28,390 --> 00:21:26,799

out on the left or on the right and so

590

00:21:29,750 --> 00:21:28,400

they ended up with strings of these

591

00:21:31,990 --> 00:21:29,760

these things and some of them end up

592

00:21:33,430 --> 00:21:32,000

with a nice neat knot

593

00:21:36,390 --> 00:21:33,440

and some of them don't

594

00:21:39,029 --> 00:21:36,400

and they ended up enumerating all 85

595

00:21:41,350 --> 00:21:39,039

ways to tie a tie and out of this comes

596

00:21:44,230 --> 00:21:41,360

the windsor knots the uh the the full

597

00:21:46,230 --> 00:21:44,240

windsor the halfway the four overhand

598

00:21:48,950 --> 00:21:46,240

all of those but there was also a brand

599

00:21:51,669 --> 00:21:48,960

new one get out and it's it's nice it's

600

00:21:53,430 --> 00:21:51,679

neat it's clean it's elegant

601
00:21:54,710 --> 00:21:53,440
and it was completely unknown it's

602
00:21:56,549 --> 00:21:54,720
symmetrical

603
00:21:58,310 --> 00:21:56,559
uh and when he went into a haberdashers

604
00:22:01,190 --> 00:21:58,320
and said i'd like to buy a tie they said

605
00:22:03,110 --> 00:22:01,200
sir try this one on he started to tie it

606
00:22:04,950 --> 00:22:03,120
using this new technique and the guy in

607
00:22:08,789 --> 00:22:04,960
the shop said well if sir learned how to

608
00:22:13,590 --> 00:22:10,830
could you do that

609
00:22:15,909 --> 00:22:13,600
again it's just completely unknown and

610
00:22:17,669 --> 00:22:15,919
it's a gorgeous one it's a fascinating

611
00:22:18,630 --> 00:22:17,679
little book that introduces you to this

612
00:22:20,789 --> 00:22:18,640
idea

613
00:22:23,270 --> 00:22:20,799

of mathematics arising in unexpected

614

00:22:25,110 --> 00:22:23,280

ways in unexpected places to show you

615

00:22:25,909 --> 00:22:25,120

things you never suspected

616

00:22:27,590 --> 00:22:25,919

and that's what happens with the

617

00:22:30,870 --> 00:22:27,600

juggling and that's what happens at math

618

00:22:32,710 --> 00:22:30,880

jam all the time is we're finding we you

619

00:22:34,789 --> 00:22:32,720

just play with these things and out of

620

00:22:36,390 --> 00:22:34,799

these sometimes come bizarre things like

621

00:22:38,630 --> 00:22:36,400

how to measure the distance to the moon

622

00:22:40,390 --> 00:22:38,640

with a pendulum uh how to measure the

623

00:22:43,510 --> 00:22:40,400

size of the earth with a stopwatch and a

624

00:22:45,750 --> 00:22:43,520

ladder uh yeah just just amazing things

625

00:22:47,830 --> 00:22:45,760

um and that's why we love to play with

626

00:22:49,909 --> 00:22:47,840

maths it's not deep it's not heavy it's

627

00:22:51,430 --> 00:22:49,919

not equations it's not formulas it's not

628

00:22:54,549 --> 00:22:51,440

calculations

629

00:22:56,149 --> 00:22:54,559

sometimes it's patterns and diagrams

630

00:22:57,590 --> 00:22:56,159

and it's just cool to share this with

631

00:22:58,710 --> 00:22:57,600

other people

632

00:23:00,870 --> 00:22:58,720

who then

633

00:23:02,549 --> 00:23:00,880

have that enthusiasm as well

634

00:23:04,710 --> 00:23:02,559

well colin wright thank you very much

635

00:23:06,470 --> 00:23:04,720

for having a chat and i don't know if

636

00:23:09,510 --> 00:23:06,480

i'll catch up with you in the next qed

637

00:23:11,029 --> 00:23:09,520

who knows who knows but um next time i'm

638

00:23:12,950 --> 00:23:11,039

in the uk and there's a math channel

639

00:23:14,870 --> 00:23:12,960

i'll certainly be certainly look me up

640

00:23:31,990 --> 00:23:14,880

front and center yep thank you very much

641

00:23:36,710 --> 00:23:34,470

is an award-winning weekly science show

642

00:23:38,230 --> 00:23:36,720

in french hosted by a bunch of crazy

643

00:23:40,710 --> 00:23:38,240

enthusiasts

644

00:23:43,029 --> 00:23:40,720

we are convinced that the greatest ideas

645

00:23:45,110 --> 00:23:43,039

in science are quite easy to grasp as

646

00:23:47,669 --> 00:23:45,120

long as they are presented with passion

647

00:23:50,149 --> 00:23:47,679

using a vocabulary common to all curious

648

00:23:51,430 --> 00:23:50,159

minds whatever their academic background

649

00:23:53,510 --> 00:23:51,440

if any

650

00:23:54,789 --> 00:23:53,520

we don't understand french yet but it's

651
00:23:56,470 --> 00:23:54,799
never too late

652
00:23:58,230 --> 00:23:56,480
all our stories have a written

653
00:24:00,390 --> 00:23:58,240
transcript on the website and people

654
00:24:03,029 --> 00:24:00,400
from all around the world are using our

655
00:24:05,669 --> 00:24:03,039
content to learn malia's language

656
00:24:08,270 --> 00:24:05,679
our topics range from zero to infinity

657
00:24:10,149 --> 00:24:08,280
from evolution to artificial life from

658
00:24:11,350 --> 00:24:10,159
electromagnetism to the science of

659
00:24:13,909 --> 00:24:11,360
introverts

660
00:24:17,510 --> 00:24:13,919
we just love mathematics science

661
00:24:19,190 --> 00:24:17,520
critical thinking so do you want to join

662
00:24:21,269 --> 00:24:19,200
you can subscribe to the podcast for

663
00:24:24,390 --> 00:24:21,279

free from our website podcast science

664

00:24:27,110 --> 00:24:24,400

dot fm that's in one word you also find

665

00:24:29,190 --> 00:24:27,120

us on itunes and soundcloud see you soon

666

00:24:41,350 --> 00:24:29,200

hopefully at

667

00:24:45,590 --> 00:24:43,909

welcome to a week in science from rios

668

00:24:46,470 --> 00:24:45,600

bringing you the science news you need

669

00:24:48,310 --> 00:24:46,480

to know

670

00:24:50,950 --> 00:24:48,320

this week in science we saw computer

671

00:24:53,669 --> 00:24:50,960

games for multitasking circumcision

672

00:25:02,630 --> 00:24:53,679

versus hiv and frogs listening through

673

00:25:07,430 --> 00:25:04,950

mysterious forest islands and bolivian

674

00:25:09,830 --> 00:25:07,440

grasslands are evidence of ancient human

675

00:25:12,070 --> 00:25:09,840

use of that area these small forests

676
00:25:14,549 --> 00:25:12,080
were thought to be ancient landforms

677
00:25:16,310 --> 00:25:14,559
long-term bird rookeries or termite

678
00:25:18,310 --> 00:25:16,320
mounds what was found was quite

679
00:25:20,070 --> 00:25:18,320
different they have turned out to be

680
00:25:22,070 --> 00:25:20,080
waste piles that have been used for

681
00:25:24,310 --> 00:25:22,080
thousands of years the piles of

682
00:25:26,070 --> 00:25:24,320
freshwater snails animal bones and

683
00:25:28,149 --> 00:25:26,080
charcoal are rubbish from

684
00:25:30,230 --> 00:25:28,159
hunter-gatherers dating back at least 10

685
00:25:32,149 --> 00:25:30,240
000 years this means we're going to have

686
00:25:36,070 --> 00:25:32,159
to rethink how humans use these

687
00:25:39,750 --> 00:25:37,669
playing computer games may be good for

688
00:25:42,230 --> 00:25:39,760

your brain after all particularly if

689

00:25:44,710 --> 00:25:42,240

you're getting old adults aged between

690

00:25:46,630 --> 00:25:44,720

20 and 79 played a specially designed

691

00:25:49,350 --> 00:25:46,640

driving game and were assessed on how

692

00:25:50,789 --> 00:25:49,360

well they multitasked the results showed

693

00:25:53,750 --> 00:25:50,799

that the participants performance

694

00:25:55,510 --> 00:25:53,760

decreased with age but older

695

00:25:57,590 --> 00:25:55,520

participants were actually able to

696

00:25:59,830 --> 00:25:57,600

increase their multitasking ability by

697

00:26:02,549 --> 00:25:59,840

playing the game more you're listening

698

00:26:06,789 --> 00:26:02,559

to a week in science from rios and now

699

00:26:10,710 --> 00:26:08,789

voluntary male circumcision in south

700

00:26:13,669 --> 00:26:10,720

african communities has been linked with

701
00:26:15,430 --> 00:26:13,679
reduced rates of hiv a betrayal of trust

702
00:26:16,789 --> 00:26:15,440
late in a relationship triggers a

703
00:26:18,950 --> 00:26:16,799
different part of the brain than a

704
00:26:21,190 --> 00:26:18,960
similar event early in the relationship

705
00:26:23,430 --> 00:26:21,200
and is more likely to be forgiven eating

706
00:26:24,390 --> 00:26:23,440
whole fruit reduces your risk of type 2

707
00:26:26,230 --> 00:26:24,400
diabetes

708
00:26:27,830 --> 00:26:26,240
but drinking only fruit juice may

709
00:26:29,669 --> 00:26:27,840
increase it and the gardener's

710
00:26:32,549 --> 00:26:29,679
seychelles frog doesn't have ears

711
00:26:34,230 --> 00:26:32,559
because it hears through its mouth

712
00:26:37,190 --> 00:26:34,240
last week we asked what percentage of

713
00:26:39,590 --> 00:26:37,200

junk food ads for kids feature free toys

714

00:26:41,110 --> 00:26:39,600

the answer according to new research is

715

00:26:43,190 --> 00:26:41,120

70

716

00:26:45,029 --> 00:26:43,200

this week a historical science fact for

717

00:26:47,190 --> 00:26:45,039

you did you know that the creator of

718

00:26:49,269 --> 00:26:47,200

sherlock holmes sir arthur conan doyle

719

00:26:51,269 --> 00:26:49,279

was a doctor who studied neurology

720

00:26:52,789 --> 00:26:51,279

that's it for this week in science for

721

00:26:55,269 --> 00:26:52,799

more information on these and other

722

00:26:59,669 --> 00:26:55,279

science news stories go to the rio's

723

00:27:05,269 --> 00:27:01,909

follow us on twitter using the hashtag

724

00:27:07,590 --> 00:27:05,279

weekinsigh and like us on facebook

725

00:27:17,029 --> 00:27:07,600

i'm tania maya and i'll catch you next

726

00:27:30,870 --> 00:27:21,190

here's maynard's spooky action

727

00:27:34,390 --> 00:27:32,630

but ladies and gentlemen i've got a guy

728

00:27:36,630 --> 00:27:34,400

on the phone now who's written a book

729

00:27:38,310 --> 00:27:36,640

how to sound really clever and he

730

00:27:40,470 --> 00:27:38,320

certainly succeeded because his name's

731

00:27:42,549 --> 00:27:40,480

hubert vanderberg if that is his real

732

00:27:44,549 --> 00:27:42,559

name now he's a bit of a language

733

00:27:47,350 --> 00:27:44,559

enthusiast he's read french and

734

00:27:49,510 --> 00:27:47,360

linguistics at oxford university and uh

735

00:27:51,669 --> 00:27:49,520

that means he's intimately uh acquainted

736

00:27:53,669 --> 00:27:51,679

with the seminal work of noam chomsky i

737

00:27:55,430 --> 00:27:53,679

imagine hubert how are you

738

00:27:56,710 --> 00:27:55,440

i'm very good indeed thanks man thanks

739

00:27:58,389 --> 00:27:56,720

for having me on the show oh look it's

740

00:28:00,310 --> 00:27:58,399

great to have you i use the word seminal

741

00:28:01,669 --> 00:28:00,320

there with noam chomsky is that the

742

00:28:03,190 --> 00:28:01,679

correct use of the linguistics

743

00:28:04,950 --> 00:28:03,200

professor's work

744

00:28:07,350 --> 00:28:04,960

it certainly is actually that's very

745

00:28:09,110 --> 00:28:07,360

impressive if i might say and um and

746

00:28:11,830 --> 00:28:09,120

yeah seminal is one of my favorites it's

747

00:28:13,590 --> 00:28:11,840

uh it's actually from the latin seed and

748

00:28:15,190 --> 00:28:13,600

it's all about

749

00:28:18,230 --> 00:28:15,200

selling the seeds for the future and

750

00:28:20,870 --> 00:28:18,240

chomsky um yeah i i i encountered him a

751

00:28:23,269 --> 00:28:20,880

little bit in linguistics so uh so yeah

752

00:28:25,430 --> 00:28:23,279

yeah i always find it this um how i try

753

00:28:27,909 --> 00:28:25,440

and sound clever is i throw names like

754

00:28:29,750 --> 00:28:27,919

noam chomsky in because

755

00:28:31,590 --> 00:28:29,760

most of the time people know that he's a

756

00:28:33,669 --> 00:28:31,600

smart guy but they don't know much about

757

00:28:35,750 --> 00:28:33,679

linguistics like myself so i'll get a

758

00:28:38,070 --> 00:28:35,760

pass on that that's how i sound clever

759

00:28:39,909 --> 00:28:38,080

you've got 600 words in your book here

760

00:28:41,350 --> 00:28:39,919

that will probably work if you can use

761

00:28:42,870 --> 00:28:41,360

them correctly and i've got to say

762

00:28:45,430 --> 00:28:42,880

you've got the name to start with there

763

00:28:46,789 --> 00:28:45,440

hubert van der berg that's great

764

00:28:48,149 --> 00:28:46,799

thank you very much but it's from the

765

00:28:50,870 --> 00:28:48,159

mountains in belgium but thank you

766

00:28:53,190 --> 00:28:50,880

that's very kind well these words are um

767

00:28:54,389 --> 00:28:53,200

you know i mean i i i used to hear them

768

00:28:56,630 --> 00:28:54,399

out loud

769

00:28:59,029 --> 00:28:56,640

and i think families give their children

770

00:29:01,269 --> 00:28:59,039

one or two of these words i know one

771

00:29:03,590 --> 00:29:01,279

friend his mother talks about titivating

772

00:29:05,750 --> 00:29:03,600

the christmas tree every year um you

773

00:29:08,710 --> 00:29:05,760

know adding a little bit of spice to the

774

00:29:10,070 --> 00:29:08,720

tree um and um and also i see them

775

00:29:11,669 --> 00:29:10,080

written in newspaper articles i just

776

00:29:13,190 --> 00:29:11,679

thought nobody i know

777

00:29:15,110 --> 00:29:13,200

actually understands these words and no

778

00:29:17,110 --> 00:29:15,120

one interrupts a speaker halfway through

779

00:29:18,950 --> 00:29:17,120

a conversation and so no one's actually

780

00:29:21,430 --> 00:29:18,960

improving their vocabulary at any time

781

00:29:22,630 --> 00:29:21,440

so i'd put them all down and use some

782

00:29:25,110 --> 00:29:22,640

use some

783

00:29:27,510 --> 00:29:25,120

examples involving celebrities so

784

00:29:28,789 --> 00:29:27,520

i could understand them and i mean i

785

00:29:30,310 --> 00:29:28,799

think i might give you a couple of

786

00:29:32,230 --> 00:29:30,320

examples right now actually oh look yeah

787

00:29:33,830 --> 00:29:32,240

please so because we're all trying to

788

00:29:35,029 --> 00:29:33,840

get to do this but give us a few

789

00:29:37,909 --> 00:29:35,039

examples

790

00:29:39,430 --> 00:29:37,919

yeah okay well um well i'll start with

791

00:29:42,950 --> 00:29:39,440

some of the ones i used to get very

792

00:29:45,909 --> 00:29:42,960

wrong so it starts like non-plus

793

00:29:47,350 --> 00:29:45,919

and people use that quite a lot and um

794

00:29:50,230 --> 00:29:47,360

and they usually

795

00:29:52,070 --> 00:29:50,240

mean by that um that they weren't

796

00:29:54,070 --> 00:29:52,080

shocked they were less slightly cold by

797

00:29:56,789 --> 00:29:54,080

an expert they're non-plus by the

798

00:29:58,870 --> 00:29:56,799

theater that night but actually it means

799

00:30:00,470 --> 00:29:58,880

to be very shocked

800

00:30:02,310 --> 00:30:00,480

um because it comes from the french

801
00:30:04,789 --> 00:30:02,320
non-pro which means nothing more you can

802
00:30:06,870 --> 00:30:04,799
do nothing more but you're so shocked so

803
00:30:09,590 --> 00:30:06,880
actually the word you want to use is

804
00:30:11,430 --> 00:30:09,600
indifferent the non-trust is is

805
00:30:13,190 --> 00:30:11,440
i misused quite a lot of that one and

806
00:30:15,750 --> 00:30:13,200
then also um

807
00:30:17,269 --> 00:30:15,760
a word like sanguine i don't know um how

808
00:30:18,870 --> 00:30:17,279
how you use that but i always used to

809
00:30:20,549 --> 00:30:18,880
think it meant that you're quite relaxed

810
00:30:22,950 --> 00:30:20,559
about the situation you're sanguine

811
00:30:24,549 --> 00:30:22,960
about a problem at work it actually

812
00:30:26,389 --> 00:30:24,559
means optimistic

813
00:30:28,389 --> 00:30:26,399

and it comes from the latin sanguist

814

00:30:29,750 --> 00:30:28,399

blood which means you had rosy cheeks

815

00:30:31,110 --> 00:30:29,760

because you're optimistic about

816

00:30:32,870 --> 00:30:31,120

something so i was totally misleading

817

00:30:34,149 --> 00:30:32,880

that one as well

818

00:30:36,230 --> 00:30:34,159

i was the one the words you've got in

819

00:30:38,389 --> 00:30:36,240

your book that i was glad to see there

820

00:30:40,230 --> 00:30:38,399

because i've i've always assumed you

821

00:30:43,269 --> 00:30:40,240

could only use it in one way and that is

822

00:30:46,630 --> 00:30:43,279

the the extreme word pogrom which i

823

00:30:50,310 --> 00:30:46,640

always thought was a violent riot and

824

00:30:52,630 --> 00:30:50,320

only directed towards jews but its root

825

00:30:54,470 --> 00:30:52,640

means that it's a government-sponsored

826

00:30:56,710 --> 00:30:54,480

uh aggression and it could be against

827

00:31:00,789 --> 00:30:56,720

any ethnic group is that correct that's

828

00:31:03,510 --> 00:31:00,799

right exactly um and um i mean it it's i

829

00:31:06,630 --> 00:31:03,520

mean there have been for example um

830

00:31:08,789 --> 00:31:06,640

recently the u.s press described obama

831

00:31:10,070 --> 00:31:08,799

as having a pogrom against christians in

832

00:31:12,389 --> 00:31:10,080

terms of um

833

00:31:14,149 --> 00:31:12,399

appointing um non-christian law

834

00:31:15,909 --> 00:31:14,159

professors exclusively to senior posts

835

00:31:17,909 --> 00:31:15,919

and things like that i mean it started

836

00:31:19,750 --> 00:31:17,919

off very much as problems against the

837

00:31:21,669 --> 00:31:19,760

jews in russia

838

00:31:24,549 --> 00:31:21,679

um in the 19th century but then it's

839

00:31:25,870 --> 00:31:24,559

it's it does encompass um any any

840

00:31:28,710 --> 00:31:25,880

government

841

00:31:31,110 --> 00:31:28,720

organization groups exactly now because

842

00:31:33,029 --> 00:31:31,120

the meanings for words can change i mean

843

00:31:35,750 --> 00:31:33,039

that could be an example if you used it

844

00:31:37,029 --> 00:31:35,760

now and it wasn't uh against a jewish

845

00:31:38,310 --> 00:31:37,039

group um you could get people

846

00:31:40,470 --> 00:31:38,320

complaining because they would think

847

00:31:43,269 --> 00:31:40,480

you're using the word wrong exactly and

848

00:31:46,310 --> 00:31:43,279

you do you do get that um quite a lot

849

00:31:49,590 --> 00:31:46,320

and another one is um decimate

850

00:31:52,230 --> 00:31:49,600

which everyone assumes means to totally

851
00:31:54,149 --> 00:31:52,240
destroy something you talk about a team

852
00:31:56,149 --> 00:31:54,159
being decimated by the other team in a

853
00:31:58,389 --> 00:31:56,159
football match but actually it means to

854
00:31:59,830 --> 00:31:58,399
just skim the surface because it comes

855
00:32:01,190 --> 00:31:59,840
from the latin tradition is when you

856
00:32:03,590 --> 00:32:01,200
conquered a team

857
00:32:05,509 --> 00:32:03,600
you'd um kill one man in every ten which

858
00:32:07,269 --> 00:32:05,519
obviously was devastating but it wasn't

859
00:32:08,630 --> 00:32:07,279
it didn't you didn't destroy it nine out

860
00:32:10,230 --> 00:32:08,640
of ten it's only one other times you're

861
00:32:11,909 --> 00:32:10,240
just skimming the surface of something

862
00:32:12,870 --> 00:32:11,919
you're not actually really destroying

863
00:32:14,710 --> 00:32:12,880

them

864

00:32:16,389 --> 00:32:14,720

again

865

00:32:18,630 --> 00:32:16,399

oh we were decimated you said what well

866

00:32:20,630 --> 00:32:18,640

there's 90 percent of you left so

867

00:32:22,710 --> 00:32:20,640

yeah

868

00:32:25,029 --> 00:32:22,720

that that is a very interesting and also

869

00:32:26,509 --> 00:32:25,039

i've been using the word uh from the uh

870

00:32:28,950 --> 00:32:26,519

faustian

871

00:32:31,669 --> 00:32:28,960

f-u-s-t-i-a-n and every time i say it

872

00:32:33,990 --> 00:32:31,679

people think i'm saying faustian oh the

873

00:32:36,230 --> 00:32:34,000

play with the devil on his back no no no

874

00:32:38,149 --> 00:32:36,240

faustian and it's a word that is not

875

00:32:39,909 --> 00:32:38,159

used at all anymore do you hear it at

876

00:32:41,990 --> 00:32:39,919

all in conversation

877

00:32:44,549 --> 00:32:42,000

yeah i have actually i've i've seen it

878

00:32:46,149 --> 00:32:44,559

in articles and seen it i've heard i

879

00:32:48,070 --> 00:32:46,159

think i've heard a couple of people use

880

00:32:50,310 --> 00:32:48,080

it i mean well it's a very nice one

881

00:32:53,110 --> 00:32:50,320

because it's um it's again referred to

882

00:32:55,669 --> 00:32:53,120

that stuffing you put inside pillows

883

00:32:57,669 --> 00:32:55,679

um and um and this is using the 12th

884

00:33:00,070 --> 00:32:57,679

century for padding out pillows and so

885

00:33:01,509 --> 00:33:00,080

it means pompous of speech

886

00:33:03,190 --> 00:33:01,519

um because um

887

00:33:06,470 --> 00:33:03,200

you're padding out your language as well

888

00:33:07,750 --> 00:33:06,480

so it's a nice one that one um and um

889

00:33:09,350 --> 00:33:07,760

yeah the there

890

00:33:11,909 --> 00:33:09,360

they have there are some fun stories

891

00:33:14,870 --> 00:33:11,919

behind these words like that one um and

892

00:33:17,830 --> 00:33:14,880

then there's also things like dog days

893

00:33:19,590 --> 00:33:17,840

um the summer days um and you know i was

894

00:33:21,509 --> 00:33:19,600

looking up that the other day and it's

895

00:33:23,350 --> 00:33:21,519

because between july and september the

896

00:33:26,549 --> 00:33:23,360

romans used to believe that

897

00:33:28,070 --> 00:33:26,559

the sun rose in line with the dog star

898

00:33:29,909 --> 00:33:28,080

and that was what accounted for the

899

00:33:32,549 --> 00:33:29,919

heats in the minds of the romans but

900

00:33:34,710 --> 00:33:32,559

actually um that's not scientifically

901
00:33:36,470 --> 00:33:34,720
true and the dog saw is not linked to

902
00:33:38,230 --> 00:33:36,480
the heat but anyway the name stuck even

903
00:33:39,590 --> 00:33:38,240
though the science is wrong and so we

904
00:33:41,750 --> 00:33:39,600
still use it and then the other word

905
00:33:43,750 --> 00:33:41,760
pastiche which is a kind of mixture of

906
00:33:47,029 --> 00:33:43,760
stars is actually refers to

907
00:33:48,870 --> 00:33:47,039
pastry and how that's all mixed together

908
00:33:50,630 --> 00:33:48,880
through flour and fat and oil and

909
00:33:52,070 --> 00:33:50,640
delicious things to eat and so that's

910
00:33:54,470 --> 00:33:52,080
where you get the word pasteurized from

911
00:33:57,669 --> 00:33:54,480
pastry so there are some some quite fun

912
00:33:59,909 --> 00:33:57,679
stories behind these as well

913
00:34:01,830 --> 00:33:59,919

do you think if in the bid to try and

914

00:34:03,669 --> 00:34:01,840

sound a little bit more clever you use

915

00:34:05,110 --> 00:34:03,679

these words and no one knows what you

916

00:34:06,710 --> 00:34:05,120

mean and you have to explain them that

917

00:34:08,710 --> 00:34:06,720

that could just be a different kind of

918

00:34:10,629 --> 00:34:08,720

annoying for them

919

00:34:12,069 --> 00:34:10,639

yeah i know absolutely no i agree i

920

00:34:13,669 --> 00:34:12,079

think

921

00:34:15,829 --> 00:34:13,679

you know if you misuse them then there's

922

00:34:18,310 --> 00:34:15,839

a danger that they're unhelpful for

923

00:34:19,909 --> 00:34:18,320

everyone i think i think what's um nice

924

00:34:21,510 --> 00:34:19,919

about them is that people very quickly

925

00:34:22,310 --> 00:34:21,520

get them from the context and actually

926
00:34:24,790 --> 00:34:22,320
people

927
00:34:26,470 --> 00:34:24,800
like a slight um zany word to be thrown

928
00:34:28,069 --> 00:34:26,480
in once in a while you know just for a

929
00:34:29,990 --> 00:34:28,079
bit of variety apart from anything else

930
00:34:32,149 --> 00:34:30,000
i think so i think in the other ones

931
00:34:33,750 --> 00:34:32,159
they don't have any synonyms so if you

932
00:34:35,430 --> 00:34:33,760
don't know them then you can't express

933
00:34:38,470 --> 00:34:35,440
yourself using any other word so there's

934
00:34:40,470 --> 00:34:38,480
a word like quixotic as well which is um

935
00:34:43,430 --> 00:34:40,480
from don quixote and that's about all

936
00:34:46,710 --> 00:34:43,440
all about the excessive dreamy idealism

937
00:34:50,149 --> 00:34:46,720
of don quixote so if if you

938
00:34:52,149 --> 00:34:50,159

someone was on a date um and um they put

939

00:34:54,470 --> 00:34:52,159

a coat over a puddle

940

00:34:56,310 --> 00:34:54,480

um for um

941

00:34:58,470 --> 00:34:56,320

for someone to step over the

942

00:35:00,150 --> 00:34:58,480

puddle of water and they ruined their

943

00:35:02,069 --> 00:35:00,160

coat that was an example of quick sotic

944

00:35:04,230 --> 00:35:02,079

behavior so it's really just a little

945

00:35:05,109 --> 00:35:04,240

bit excessive um and but there's no

946

00:35:07,270 --> 00:35:05,119

other word in the language that

947

00:35:09,030 --> 00:35:07,280

encompasses that you see so i don't know

948

00:35:11,670 --> 00:35:09,040

that true and did you actually where do

949

00:35:13,510 --> 00:35:11,680

you go to have a look for the usage of

950

00:35:15,750 --> 00:35:13,520

new words or old words that are coming

951
00:35:17,430 --> 00:35:15,760
back is there a website that looks at

952
00:35:19,270 --> 00:35:17,440
this kind of thing is there a is there a

953
00:35:21,270 --> 00:35:19,280
learned place of new words that are

954
00:35:23,190 --> 00:35:21,280
being born that we can look at

955
00:35:24,950 --> 00:35:23,200
no there isn't actually i mean

956
00:35:27,750 --> 00:35:24,960
the um

957
00:35:29,030 --> 00:35:27,760
i just got them by over over a few years

958
00:35:31,829 --> 00:35:29,040
i just

959
00:35:34,069 --> 00:35:31,839
took notes um from newspapers and from

960
00:35:35,430 --> 00:35:34,079
conversations and whenever i came across

961
00:35:38,470 --> 00:35:35,440
a word more than

962
00:35:39,829 --> 00:35:38,480
um a few times then i'd take it down i

963
00:35:41,910 --> 00:35:39,839

wouldn't include stuff that was a

964

00:35:43,750 --> 00:35:41,920

one-off because it wouldn't be useful

965

00:35:45,190 --> 00:35:43,760

but um there isn't there isn't actually

966

00:35:46,870 --> 00:35:45,200

a website that doesn't well the only

967

00:35:48,470 --> 00:35:46,880

thing is every year obviously

968

00:35:50,870 --> 00:35:48,480

the oxford english dictionary certainly

969

00:35:52,390 --> 00:35:50,880

over here does does a a great survey of

970

00:35:54,470 --> 00:35:52,400

all the the new words of these and we've

971

00:35:55,430 --> 00:35:54,480

got omnishamble then this year to

972

00:35:58,069 --> 00:35:55,440

describe

973

00:36:00,470 --> 00:35:58,079

um the government i think you know

974

00:36:01,910 --> 00:36:00,480

i like that

975

00:36:03,829 --> 00:36:01,920

and then there are a few others like

976

00:36:05,990 --> 00:36:03,839

that going around and of course a lot of

977

00:36:08,310 --> 00:36:06,000

them are linked to new technologies the

978

00:36:09,910 --> 00:36:08,320

selfie came in this year as well and and

979

00:36:11,829 --> 00:36:09,920

things like that so

980

00:36:14,069 --> 00:36:11,839

um but they usually there isn't there is

981

00:36:15,990 --> 00:36:14,079

alternative source at the moment and how

982

00:36:17,750 --> 00:36:16,000

do you do that i mean i've got a

983

00:36:19,750 --> 00:36:17,760

twitter account at sound clever and

984

00:36:21,750 --> 00:36:19,760

every every day i try and do a new word

985

00:36:23,510 --> 00:36:21,760

for people to put which i've seen in the

986

00:36:25,750 --> 00:36:23,520

newspaper which i'll tweet that day and

987

00:36:27,270 --> 00:36:25,760

and i i find that quite fun to do oh

988

00:36:30,310 --> 00:36:27,280

okay now that that twitter account is

989

00:36:32,230 --> 00:36:30,320

one word and it just at sounds clever

990

00:36:34,550 --> 00:36:32,240

yeah that sounds clever with no s in the

991

00:36:36,470 --> 00:36:34,560

middle just sound clever

992

00:36:39,270 --> 00:36:36,480

oh we can follow you on that uh this is

993

00:36:40,790 --> 00:36:39,280

an amazing bunch of words that you put

994

00:36:43,270 --> 00:36:40,800

together here and how long did you say

995

00:36:45,430 --> 00:36:43,280

it took to find these ones well it took

996

00:36:47,030 --> 00:36:45,440

about two years of actually

997

00:36:48,790 --> 00:36:47,040

stalking them and trapping them as it

998

00:36:50,470 --> 00:36:48,800

were and then another six months to

999

00:36:53,270 --> 00:36:50,480

write them all up and find some find

1000

00:36:54,310 --> 00:36:53,280

some good examples hopefully um and um

1001
00:36:56,150 --> 00:36:54,320
but it's funny because you know

1002
00:36:58,790 --> 00:36:56,160
apparently we've all got 20 000 words in

1003
00:37:00,950 --> 00:36:58,800
our vocabulary and it's only 600 that

1004
00:37:02,310 --> 00:37:00,960
actually make the difference between um

1005
00:37:04,550 --> 00:37:02,320
you know having to be able to fully

1006
00:37:07,510 --> 00:37:04,560
express yourself and not it might be and

1007
00:37:09,109 --> 00:37:07,520
since i wrote this book i i found that

1008
00:37:10,630 --> 00:37:09,119
when you have a thought it's much easier

1009
00:37:13,030 --> 00:37:10,640
to remember that thought because if you

1010
00:37:15,190 --> 00:37:13,040
can link the thought to a word

1011
00:37:16,950 --> 00:37:15,200
then um it stays with you a bit longer

1012
00:37:17,670 --> 00:37:16,960
so i i think it's it's very good just

1013
00:37:19,670 --> 00:37:17,680

for

1014

00:37:21,670 --> 00:37:19,680

the general mental cogitation and why

1015

00:37:23,589 --> 00:37:21,680

have you

1016

00:37:25,430 --> 00:37:23,599

look i think it's a great book how to

1017

00:37:27,270 --> 00:37:25,440

sound really clever you can dip into it

1018

00:37:28,870 --> 00:37:27,280

a little bit you can dip into it a lot

1019

00:37:29,990 --> 00:37:28,880

and i would suggest before you you go

1020

00:37:31,829 --> 00:37:30,000

out there and you try a few of these

1021

00:37:33,270 --> 00:37:31,839

words you get online and get an audio

1022

00:37:35,510 --> 00:37:33,280

sample of this so that you can get a bit

1023

00:37:36,550 --> 00:37:35,520

of an idea if your pronunciation is

1024

00:37:38,870 --> 00:37:36,560

correct

1025

00:37:40,790 --> 00:37:38,880

yes exactly and dictionary.com is very

1026

00:37:42,870 --> 00:37:40,800

good to that because they have a little

1027

00:37:44,630 --> 00:37:42,880

um speaker button next to each word and

1028

00:37:47,349 --> 00:37:44,640

you just click on it and listen to it

1029

00:37:49,670 --> 00:37:47,359

although sometimes it can be an american

1030

00:37:52,310 --> 00:37:49,680

yes yes you can absolutely absolutely

1031

00:37:53,670 --> 00:37:52,320

right yeah and and do you and as uh how

1032

00:37:56,150 --> 00:37:53,680

do you feel that the americans have done

1033

00:37:57,270 --> 00:37:56,160

a lot to ruin ruin the allegedly english

1034

00:37:58,710 --> 00:37:57,280

language or do you think it's part of

1035

00:38:00,630 --> 00:37:58,720

the evolution

1036

00:38:02,230 --> 00:38:00,640

no i think i think they've actually been

1037

00:38:03,829 --> 00:38:02,240

i very much like the way the americans

1038

00:38:05,589 --> 00:38:03,839

talk because they they've resurrected a

1039

00:38:07,310 --> 00:38:05,599

few words that certainly in england we

1040

00:38:10,069 --> 00:38:07,320

stopped using some lovely ones like

1041

00:38:11,910 --> 00:38:10,079

discombobulated which is just a lovely

1042

00:38:13,750 --> 00:38:11,920

word and it obviously means to be

1043

00:38:16,470 --> 00:38:13,760

confused as if you've

1044

00:38:18,230 --> 00:38:16,480

tripped over and hurt your head and um

1045

00:38:20,550 --> 00:38:18,240

that that used to be used a lot in

1046

00:38:22,870 --> 00:38:20,560

england and now americans use it in

1047

00:38:24,870 --> 00:38:22,880

everyday speech um uh i was very

1048

00:38:27,270 --> 00:38:24,880

surprised to hear that when i was in new

1049

00:38:29,589 --> 00:38:27,280

york so um i think they have resurrected

1050

00:38:31,190 --> 00:38:29,599

some great work there um and then they

1051

00:38:34,150 --> 00:38:31,200

do come up with

1052

00:38:35,750 --> 00:38:34,160

um some some new interpretations and

1053

00:38:36,870 --> 00:38:35,760

some of them can be confusing and one of

1054

00:38:39,430 --> 00:38:36,880

them is

1055

00:38:42,310 --> 00:38:39,440

this this word substantive and what does

1056

00:38:44,310 --> 00:38:42,320

that mean compared to substantial

1057

00:38:45,990 --> 00:38:44,320

um and substantive i had to get that up

1058

00:38:47,270 --> 00:38:46,000

for the book because i was kept on here

1059

00:38:48,470 --> 00:38:47,280

and i didn't know really what the

1060

00:38:49,990 --> 00:38:48,480

difference was and actually

1061

00:38:52,069 --> 00:38:50,000

substantively just means it's got a

1062

00:38:54,710 --> 00:38:52,079

basis in reality so in other words it's

1063

00:38:56,230 --> 00:38:54,720

not it's not a lie you can talk about a

1064

00:38:59,190 --> 00:38:56,240

journalist coming up with a lot of

1065

00:39:00,790 --> 00:38:59,200

substantive facts but it's not quite the

1066

00:39:03,109 --> 00:39:00,800

same as substantial but i think

1067

00:39:04,710 --> 00:39:03,119

some of those kind of things um

1068

00:39:06,470 --> 00:39:04,720

they are they can be confusing another

1069

00:39:08,150 --> 00:39:06,480

one is enormity and i don't know whether

1070

00:39:09,990 --> 00:39:08,160

that came from america but people talk

1071

00:39:11,750 --> 00:39:10,000

about the enormity of the situation i

1072

00:39:14,310 --> 00:39:11,760

was watching the wimbledon final on

1073

00:39:15,990 --> 00:39:14,320

television this summer and they the

1074

00:39:18,230 --> 00:39:16,000

commentators take like the enormity of

1075

00:39:20,390 --> 00:39:18,240

the match in front of us normandy

1076

00:39:22,230 --> 00:39:20,400

actually means great evil

1077

00:39:24,790 --> 00:39:22,240

you talk about the enormity of hitler's

1078

00:39:25,990 --> 00:39:24,800

crimes but you shouldn't use it outside

1079

00:39:28,310 --> 00:39:26,000

of that because

1080

00:39:29,589 --> 00:39:28,320

the word you want is enormous um and

1081

00:39:31,270 --> 00:39:29,599

there's there's a big difference between

1082

00:39:33,190 --> 00:39:31,280

them i know it sounds slightly pedantic

1083

00:39:35,750 --> 00:39:33,200

but it's um it's interesting i never

1084

00:39:37,829 --> 00:39:35,760

knew enormously meant uh huge people yes

1085

00:39:40,310 --> 00:39:37,839

there was a a recently diagnosed

1086

00:39:41,109 --> 00:39:40,320

psychiatric condition where you think

1087

00:39:42,870 --> 00:39:41,119

that

1088

00:39:44,950 --> 00:39:42,880

someone's making a movie of you or

1089

00:39:47,109 --> 00:39:44,960

you're continuously being observed

1090

00:39:50,310 --> 00:39:47,119

called the truman syndrome so i'm

1091

00:39:52,790 --> 00:39:50,320

wondering if a word may evolve as a

1092

00:39:54,069 --> 00:39:52,800

trumanism or something like that which

1093

00:39:55,910 --> 00:39:54,079

which would mean something completely

1094

00:39:58,150 --> 00:39:55,920

apart from the presidency of harry

1095

00:39:59,349 --> 00:39:58,160

truman but yeah but reflecting to that

1096

00:40:00,630 --> 00:39:59,359

is that the kind of thing you can see

1097

00:40:03,190 --> 00:40:00,640

evolving

1098

00:40:04,390 --> 00:40:03,200

yeah certainly i mean i think um i i

1099

00:40:05,510 --> 00:40:04,400

look this up because i've been trying to

1100

00:40:07,349 --> 00:40:05,520

get a few

1101
00:40:09,670 --> 00:40:07,359
new words on my own into the language

1102
00:40:11,670 --> 00:40:09,680
and i've failed very singularly so far

1103
00:40:13,349 --> 00:40:11,680
but it's kind of you have to have a

1104
00:40:15,430 --> 00:40:13,359
certain number of people recognize it

1105
00:40:17,750 --> 00:40:15,440
don't you yes you i think you the rule

1106
00:40:19,910 --> 00:40:17,760
is you've got to see it written down in

1107
00:40:22,630 --> 00:40:19,920
a in a newspaper or a national

1108
00:40:24,950 --> 00:40:22,640
publication five times and then you're

1109
00:40:27,190 --> 00:40:24,960
going to send it off to the to the other

1110
00:40:29,829 --> 00:40:27,200
english dictionary or another dictionary

1111
00:40:31,190 --> 00:40:29,839
and say here's proof but i i've been

1112
00:40:32,630 --> 00:40:31,200
trying to get the following word in

1113
00:40:34,470 --> 00:40:32,640

because you know when your phone rings

1114

00:40:35,990 --> 00:40:34,480

your mobile phone in your pocket and you

1115

00:40:38,150 --> 00:40:36,000

pick it up and actually it hasn't rung

1116

00:40:39,109 --> 00:40:38,160

at all you just imagined it and i want

1117

00:40:43,750 --> 00:40:39,119

to

1118

00:40:45,270 --> 00:40:43,760

but um i am i haven't succeeded in

1119

00:40:49,750 --> 00:40:45,280

getting that into the language ah so

1120

00:40:52,950 --> 00:40:50,829

exactly

1121

00:40:54,310 --> 00:40:52,960

phantom see i thought i was sounding

1122

00:40:56,550 --> 00:40:54,320

clever until i was chatting with you

1123

00:40:59,190 --> 00:40:56,560

hubert vanderberg but i i think i'm just

1124

00:41:01,510 --> 00:40:59,200

where i started yeah well thank you very

1125

00:41:03,190 --> 00:41:01,520

much indeed it's a very good sport

1126

00:41:04,870 --> 00:41:03,200

that's a really good part thank you look

1127

00:41:07,190 --> 00:41:04,880

the book is how to sound really clever

1128

00:41:09,109 --> 00:41:07,200

uh hubert vanderberg it's by bloomsbury

1129

00:41:24,870 --> 00:41:09,119

and give it a read and like i said use

1130

00:41:28,950 --> 00:41:26,550

now on belfast fm we turn to the

1131

00:41:31,030 --> 00:41:28,960

personal ads easing going and confident

1132

00:41:33,670 --> 00:41:31,040

skeptic seeks other critical thinkers

1133

00:41:35,750 --> 00:41:33,680

for fun laughter and good times must be

1134

00:41:37,829 --> 00:41:35,760

willing to apply logic liberally and a

1135

00:41:39,910 --> 00:41:37,839

good listener expect something new and

1136

00:41:41,910 --> 00:41:39,920

interesting every month come and meet me

1137

00:41:43,910 --> 00:41:41,920

in belfast in northern ireland if this

1138

00:41:46,390 --> 00:41:43,920

sounds like you check out my profile on

1139

00:41:51,430 --> 00:41:46,400

belfastskeptics.com

1140

00:41:55,270 --> 00:41:53,430

and with that we say a very good evening

1141

00:41:57,030 --> 00:41:55,280

to richard saunders go richard ah good

1142

00:41:58,870 --> 00:41:57,040

evening again mike how are you not too

1143

00:42:00,630 --> 00:41:58,880

bad not too bad sitting healthy now good

1144

00:42:02,790 --> 00:42:00,640

on you look i enjoyed our last

1145

00:42:05,430 --> 00:42:02,800

conversation i thought we could maybe

1146

00:42:06,630 --> 00:42:05,440

encapsulate a few things in in future

1147

00:42:08,230 --> 00:42:06,640

just every other couple of weeks or

1148

00:42:10,150 --> 00:42:08,240

whatever and just catch up with you

1149

00:42:12,790 --> 00:42:10,160

which i'm glad you've said yes to sounds

1150

00:42:14,630 --> 00:42:12,800

like a lot of fun it does indeed one of

1151
00:42:16,390 --> 00:42:14,640
the the topics tonight and i've always

1152
00:42:18,309 --> 00:42:16,400
been interested in this because

1153
00:42:20,069 --> 00:42:18,319
i've never really worked out why and

1154
00:42:22,470 --> 00:42:20,079
we're talking about spontaneous human

1155
00:42:24,150 --> 00:42:22,480
combustion and i suppose

1156
00:42:26,230 --> 00:42:24,160
many people think that human beings just

1157
00:42:28,870 --> 00:42:26,240
literally burst into flames but do they

1158
00:42:31,190 --> 00:42:28,880
well it's a very strange story indeed

1159
00:42:32,790 --> 00:42:31,200
spontaneous human combustion and a lot

1160
00:42:35,910 --> 00:42:32,800
of people out there certainly heard of

1161
00:42:38,550 --> 00:42:35,920
it and some may be even fearful of it

1162
00:42:41,750 --> 00:42:38,560
but many people think that human beings

1163
00:42:44,470 --> 00:42:41,760

can literally burn or burst into flames

1164

00:42:46,870 --> 00:42:44,480

strange cases with uh photographs by

1165

00:42:49,910 --> 00:42:46,880

investigating police show the remains of

1166

00:42:53,109 --> 00:42:49,920

people who have almost entirely been

1167

00:42:55,750 --> 00:42:53,119

destroyed by fire even as far as turning

1168

00:42:59,510 --> 00:42:55,760

their bones into powder which is very

1169

00:43:01,990 --> 00:42:59,520

strange indeed if uh and also one of the

1170

00:43:03,589 --> 00:43:02,000

sweetest aspects of these cases was the

1171

00:43:06,150 --> 00:43:03,599

room and the house that the people were

1172

00:43:08,470 --> 00:43:06,160

in didn't burn down yet such things as

1173

00:43:11,990 --> 00:43:08,480

tv sets and radios and other things in

1174

00:43:13,750 --> 00:43:12,000

the room were melted but not but i know

1175

00:43:15,670 --> 00:43:13,760

and i've seen some of those photos too

1176

00:43:17,829 --> 00:43:15,680

richard and it was really i think the

1177

00:43:20,309 --> 00:43:17,839

one i saw i remember was someone sitting

1178

00:43:22,150 --> 00:43:20,319

in an armchair and the whole armchair

1179

00:43:24,309 --> 00:43:22,160

was burnt and the person was burnt and

1180

00:43:26,630 --> 00:43:24,319

just the surrounds a little but nothing

1181

00:43:29,349 --> 00:43:26,640

else it was really weird yeah and this

1182

00:43:31,750 --> 00:43:29,359

this really did baffle um investigators

1183

00:43:32,630 --> 00:43:31,760

and police and firemen for a very long

1184

00:43:35,030 --> 00:43:32,640

time

1185

00:43:39,109 --> 00:43:35,040

it that the case you were referring to

1186

00:43:42,390 --> 00:43:39,119

was one uh by the name of mrs mary reese

1187

00:43:45,589 --> 00:43:42,400

from florida now this was back in 1951

1188

00:43:48,390 --> 00:43:45,599

when the police came in they found

1189

00:43:51,030 --> 00:43:48,400

the scant remains of her body completely

1190

00:43:53,589 --> 00:43:51,040

consumed by fire sitting

1191

00:43:56,550 --> 00:43:53,599

in an armchair which was very strange

1192

00:44:00,230 --> 00:43:56,560

yeah and another strange case was dr uh

1193

00:44:01,750 --> 00:44:00,240

john bentley and this was 1966 and what

1194

00:44:03,990 --> 00:44:01,760

investigators found when they went to

1195

00:44:05,910 --> 00:44:04,000

his bathroom or maybe it was one of the

1196

00:44:07,030 --> 00:44:05,920

family members who originally discovered

1197

00:44:10,710 --> 00:44:07,040

discovered it

1198

00:44:12,790 --> 00:44:10,720

was just a hole burnt in the floor and

1199

00:44:15,589 --> 00:44:12,800

the lower part of the leg was all that

1200

00:44:18,230 --> 00:44:15,599

was left oh yes i think i've never seen

1201

00:44:20,950 --> 00:44:18,240

that tell us about the wick effect what

1202

00:44:23,910 --> 00:44:20,960

what is a wick effect okay now again

1203

00:44:25,990 --> 00:44:23,920

this is very confusing for uh the police

1204

00:44:27,670 --> 00:44:26,000

and investigators and scientists

1205

00:44:29,750 --> 00:44:27,680

and the

1206

00:44:31,990 --> 00:44:29,760

reason they hit on eventually and this

1207

00:44:33,910 --> 00:44:32,000

is after really strange far-fetched

1208

00:44:36,069 --> 00:44:33,920

reasons have been thrown back and forth

1209

00:44:38,390 --> 00:44:36,079

like fall lightning or unknown energies

1210

00:44:40,309 --> 00:44:38,400

from science and one of the most popular

1211

00:44:42,470 --> 00:44:40,319

explanations uh through the last couple

1212

00:44:44,470 --> 00:44:42,480

of centuries is that the victim simply

1213

00:44:45,829 --> 00:44:44,480

drank too much alcohol

1214

00:44:47,990 --> 00:44:45,839

now i think we're all in trouble if

1215

00:44:49,430 --> 00:44:48,000

that's really yeah

1216

00:44:51,910 --> 00:44:49,440

i might keep a bucket of water beside

1217

00:44:53,910 --> 00:44:51,920

the bed and i guess that's right yeah um

1218

00:44:57,190 --> 00:44:53,920

but these all these other explanations

1219

00:44:58,230 --> 00:44:57,200

really didn't hold water scientifically

1220

00:45:00,710 --> 00:44:58,240

but then

1221

00:45:02,790 --> 00:45:00,720

scientists came across something

1222

00:45:05,910 --> 00:45:02,800

which they call the wick effect and this

1223

00:45:07,750 --> 00:45:05,920

was helped largely by

1224

00:45:10,309 --> 00:45:07,760

luckily or unlikely for the victims

1225

00:45:12,309 --> 00:45:10,319

sometimes murderers after killing their

1226

00:45:13,990 --> 00:45:12,319

victims would try to burn the body to

1227

00:45:16,870 --> 00:45:14,000

hide the evidence

1228

00:45:19,430 --> 00:45:16,880

and investigators noticed that sometimes

1229

00:45:21,670 --> 00:45:19,440

the bodies resembled very closely the

1230

00:45:24,470 --> 00:45:21,680

cases of spontaneous or so-called

1231

00:45:26,790 --> 00:45:24,480

spontaneous human combustion one murder

1232

00:45:28,550 --> 00:45:26,800

even confessed in france to using chanel

1233

00:45:29,430 --> 00:45:28,560

number five to fuel the fire of the

1234

00:45:31,670 --> 00:45:29,440

victim

1235

00:45:34,150 --> 00:45:31,680

which was a way to go i'm sure i guess

1236

00:45:35,670 --> 00:45:34,160

so i guess so so well the upside of this

1237

00:45:37,589 --> 00:45:35,680

whole thing is they actually got to the

1238

00:45:40,870 --> 00:45:37,599

bottom of this and and the title

1239

00:45:43,109 --> 00:45:40,880

spontaneous combustion yes uh they they

1240

00:45:45,190 --> 00:45:43,119

really have the title spontaneous human

1241

00:45:46,870 --> 00:45:45,200

combustion really should be stopped now

1242

00:45:49,349 --> 00:45:46,880

it's more slow burning and this is how

1243

00:45:51,829 --> 00:45:49,359

it works it's very interesting there

1244

00:45:53,990 --> 00:45:51,839

were clues all along to support the wick

1245

00:45:56,710 --> 00:45:54,000

theory and the wick theory basically

1246

00:45:58,470 --> 00:45:56,720

says that once uh somebody dropped a

1247

00:46:00,790 --> 00:45:58,480

match or uh

1248

00:46:01,750 --> 00:46:00,800

or something a cigarette even onto their

1249

00:46:04,470 --> 00:46:01,760

clothes

1250

00:46:06,550 --> 00:46:04,480

if they can't put it out and sometimes

1251
00:46:07,829 --> 00:46:06,560
the person has sadly died by a heart

1252
00:46:10,069 --> 00:46:07,839
attack or they're in their sleep and

1253
00:46:12,230 --> 00:46:10,079
they've woken up too late the fire will

1254
00:46:14,069 --> 00:46:12,240
burn through their clothes and it sounds

1255
00:46:16,470 --> 00:46:14,079
a bit horrible but it'll burn into their

1256
00:46:20,230 --> 00:46:16,480
body and start to burn the fat

1257
00:46:23,510 --> 00:46:20,240
that drips into the clothes themselves

1258
00:46:25,270 --> 00:46:23,520
that then fuels the fire and the clothes

1259
00:46:27,670 --> 00:46:25,280
act like a wick if you can imagine a

1260
00:46:29,670 --> 00:46:27,680
candle when you light it the wax is

1261
00:46:32,230 --> 00:46:29,680
fueling that tiny little wick yeah in

1262
00:46:34,550 --> 00:46:32,240
this case the body fat the melted body

1263
00:46:36,470 --> 00:46:34,560

fat soaks into the clothes soaks into

1264

00:46:38,069 --> 00:46:36,480

the carpet and even soaks into the

1265

00:46:40,470 --> 00:46:38,079

armchair

1266

00:46:43,510 --> 00:46:40,480

and just causes the fire to burn but

1267

00:46:46,470 --> 00:46:43,520

burn in a very slow fashion with low

1268

00:46:48,550 --> 00:46:46,480

flames cause a great deal of heat that's

1269

00:46:50,950 --> 00:46:48,560

why tvs and other things in the room

1270

00:46:53,190 --> 00:46:50,960

melt the huge amount of heat but the

1271

00:46:56,069 --> 00:46:53,200

fire the flames themselves

1272

00:46:58,069 --> 00:46:56,079

are very uh are very small so the rest

1273

00:47:00,309 --> 00:46:58,079

of the room doesn't necessarily catch on

1274

00:47:02,710 --> 00:47:00,319

fire that's very interesting a lot of

1275

00:47:04,870 --> 00:47:02,720

people mightn't accept that explanation

1276
00:47:05,910 --> 00:47:04,880
in terms of uh there was some tests done

1277
00:47:07,829 --> 00:47:05,920
with pigs

1278
00:47:11,430 --> 00:47:07,839
you're absolutely right in fact uh not

1279
00:47:13,990 --> 00:47:11,440
so long ago only in 1998 was this theory

1280
00:47:16,550 --> 00:47:14,000
really put to the test where the body of

1281
00:47:18,950 --> 00:47:16,560
a dead pig as a pigs and humans have

1282
00:47:21,750 --> 00:47:18,960
similar percentage of body fat

1283
00:47:24,309 --> 00:47:21,760
was wrapped in a blanket and set on fire

1284
00:47:26,390 --> 00:47:24,319
in a controlled room to stimulate what

1285
00:47:27,430 --> 00:47:26,400
people thought was spontaneous human

1286
00:47:29,910 --> 00:47:27,440
combustion

1287
00:47:32,230 --> 00:47:29,920
over the next six hours the pig

1288
00:47:33,990 --> 00:47:32,240

continued to burn and smolder and the

1289

00:47:35,589 --> 00:47:34,000

fat went into the blanket the fat went

1290

00:47:38,710 --> 00:47:35,599

into the carpet

1291

00:47:41,510 --> 00:47:38,720

and after only five hours of of this

1292

00:47:44,069 --> 00:47:41,520

smoldering burning even the bones began

1293

00:47:45,829 --> 00:47:44,079

to turn into into powder and more fuel

1294

00:47:48,870 --> 00:47:45,839

was released from the bone marrow which

1295

00:47:53,270 --> 00:47:48,880

itself is about 80 fat temperatures in

1296

00:47:55,510 --> 00:47:53,280

the pig reached 812 degrees celsius

1297

00:47:57,910 --> 00:47:55,520

more than enough over six or seven hour

1298

00:47:59,349 --> 00:47:57,920

periods to char the body the bones

1299

00:48:01,589 --> 00:47:59,359

that's the lot

1300

00:48:03,510 --> 00:48:01,599

that's amazing really amazing stuff the

1301
00:48:04,790 --> 00:48:03,520
other thing on the agenda tonight and

1302
00:48:06,550 --> 00:48:04,800
i've got to tell you before we start

1303
00:48:08,630 --> 00:48:06,560
this chat we can get the facts we're

1304
00:48:11,109 --> 00:48:08,640
talking about fire walking i've actually

1305
00:48:12,470 --> 00:48:11,119
done this you have i have well i mean it

1306
00:48:14,710 --> 00:48:12,480
seems that some people can do the

1307
00:48:16,630 --> 00:48:14,720
impossible and walk on fire and it was a

1308
00:48:17,829 --> 00:48:16,640
mental thing for me and i i'm trying to

1309
00:48:20,390 --> 00:48:17,839
think i think it was during the wall

1310
00:48:23,270 --> 00:48:20,400
show we set up a fire out the back

1311
00:48:25,589 --> 00:48:23,280
and it was mined over mata i think was

1312
00:48:26,950 --> 00:48:25,599
the the way we were going with it and

1313
00:48:29,190 --> 00:48:26,960

they built this fire and they got the

1314

00:48:31,510 --> 00:48:29,200

coals all smoothed out and whatever and

1315

00:48:33,510 --> 00:48:31,520

i just i just i remember at the time i

1316

00:48:35,349 --> 00:48:33,520

just kept my brain and i just thought

1317

00:48:37,990 --> 00:48:35,359

neutral and i'm going to walk across

1318

00:48:41,430 --> 00:48:38,000

this and it's going to happen and and i

1319

00:48:44,390 --> 00:48:41,440

did and it there was only one very small

1320

00:48:46,230 --> 00:48:44,400

sort of singe on on one of the heels but

1321

00:48:48,470 --> 00:48:46,240

you just walk quickly and you get across

1322

00:48:50,549 --> 00:48:48,480

to the other side that's right and and

1323

00:48:53,349 --> 00:48:50,559

for a long time people were really

1324

00:48:55,510 --> 00:48:53,359

baffled about this because although we

1325

00:48:57,349 --> 00:48:55,520

hear the term mind over matter a lot

1326
00:48:59,589 --> 00:48:57,359
when it comes to something like fire and

1327
00:49:02,549 --> 00:48:59,599
its reaction with the body mind over

1328
00:49:05,030 --> 00:49:02,559
matter really can't explain why the feet

1329
00:49:07,109 --> 00:49:05,040
don't burn so scientists and skeptics i

1330
00:49:09,430 --> 00:49:07,119
guess really looked into this

1331
00:49:11,589 --> 00:49:09,440
and it really does seem on the face but

1332
00:49:13,510 --> 00:49:11,599
to be quite impossible and some cultures

1333
00:49:15,270 --> 00:49:13,520
ranging from the pacific islands to even

1334
00:49:16,790 --> 00:49:15,280
sri lanka do fire walking as part of

1335
00:49:18,710 --> 00:49:16,800
their rich traditions that you can go

1336
00:49:20,870 --> 00:49:18,720
and visit those and then they put on the

1337
00:49:23,190 --> 00:49:20,880
show but yeah as you you're right in

1338
00:49:25,670 --> 00:49:23,200

thinking that today uh firewalking is

1339

00:49:27,589 --> 00:49:25,680

used mainly by motivational speakers and

1340

00:49:29,349 --> 00:49:27,599

you and the new age movement in fact

1341

00:49:31,829 --> 00:49:29,359

people can pay hundreds of dollars to

1342

00:49:34,230 --> 00:49:31,839

get enough mystical energy in order to

1343

00:49:36,870 --> 00:49:34,240

do fire walking usually at the end of a

1344

00:49:38,549 --> 00:49:36,880

two or three day course but the the

1345

00:49:40,950 --> 00:49:38,559

truth of the matter is quite interesting

1346

00:49:43,670 --> 00:49:40,960

from a scientific point of view it turns

1347

00:49:45,349 --> 00:49:43,680

out that anybody can do walking and all

1348

00:49:47,349 --> 00:49:45,359

you need is just a little dose of

1349

00:49:48,390 --> 00:49:47,359

courage to get going and walk across the

1350

00:49:50,230 --> 00:49:48,400

coals

1351

00:49:53,270 --> 00:49:50,240

and that's the key to the whole thing

1352

00:49:55,190 --> 00:49:53,280

it's really hot coal walking as opposed

1353

00:49:57,030 --> 00:49:55,200

to fire walking because by the time

1354

00:50:00,309 --> 00:49:57,040

people actually get to walk on the bed

1355

00:50:02,950 --> 00:50:00,319

of coals the fire is quite died down and

1356

00:50:05,510 --> 00:50:02,960

it turns out that coals and ash are a

1357

00:50:08,630 --> 00:50:05,520

poor conductor of heat and if your feet

1358

00:50:10,150 --> 00:50:08,640

are only in contact with the um the hot

1359

00:50:12,069 --> 00:50:10,160

coals for a short amount of time and

1360

00:50:13,990 --> 00:50:12,079

typically two three four five steps and

1361

00:50:16,390 --> 00:50:14,000

you're off yeah there is simply not

1362

00:50:18,470 --> 00:50:16,400

enough time for all the heat to be

1363

00:50:21,270 --> 00:50:18,480

transferred into your foot in fact way

1364

00:50:23,589 --> 00:50:21,280

back in 1994 the famous uh marathon

1365

00:50:25,190 --> 00:50:23,599

runner steve monica took part in the

1366

00:50:27,829 --> 00:50:25,200

australian skeptic's firewalk in

1367

00:50:30,390 --> 00:50:27,839

ballarat to demonstrate to everybody

1368

00:50:31,990 --> 00:50:30,400

that anybody at all can do firewalking

1369

00:50:33,270 --> 00:50:32,000

and a lot of the locals joined in and

1370

00:50:34,630 --> 00:50:33,280

they didn't have to pay any money for

1371

00:50:35,990 --> 00:50:34,640

that

1372

00:50:37,750 --> 00:50:36,000

only for the hospital anyway let's not

1373

00:50:39,190 --> 00:50:37,760

go there um fabulous talking to you

1374

00:50:41,349 --> 00:50:39,200

richard thank you for your time tonight

1375

00:50:43,349 --> 00:50:41,359

and we'll catch you very shortly for

1376

00:50:45,190 --> 00:50:43,359

another look into uh the myths and

1377

00:50:47,430 --> 00:50:45,200

mysteries of this world thanks mike good

1378

00:50:49,430 --> 00:50:47,440

to talk to you too good on you that's uh

1379

00:50:51,510 --> 00:50:49,440

richard saunders there from the skeptics

1380

00:51:34,710 --> 00:50:51,520

australian skeptic society and

1381

00:51:40,069 --> 00:51:37,670

the skeptoid science podcast by brian

1382

00:51:41,270 --> 00:51:40,079

dunning is now available for chinese

1383

00:51:43,190 --> 00:51:41,280

audience

1384

00:51:44,829 --> 00:51:43,200

please tell your chinese friends to

1385

00:51:47,990 --> 00:51:44,839

visit

1386

00:51:51,190 --> 00:51:48,000

skeptoid.com.cn or find skeptoid on the

1387

00:52:08,549 --> 00:51:51,200

chinese itunes store i'm lisa from

1388

00:52:12,710 --> 00:52:10,309

thank you for listening to the skeptic

1389

00:52:14,309 --> 00:52:12,720

zone and i think i hope that in the

1390

00:52:17,430 --> 00:52:14,319

coming week i should be able to score a

1391

00:52:19,030 --> 00:52:17,440

great interview with dr pamela gay

1392

00:52:21,670 --> 00:52:19,040

and thanks to maynard who i caught up

1393

00:52:22,790 --> 00:52:21,680

with just the other day for a coffee and

1394

00:52:24,630 --> 00:52:22,800

a chat

1395

00:52:27,790 --> 00:52:24,640

good to see you maynard

1396

00:52:29,349 --> 00:52:27,800

don't forget all you sydney people visit

1397

00:52:31,109 --> 00:52:29,359

www.skeptics.com.edu to see all those

1398

00:52:32,710 --> 00:52:31,119

upcoming events like the

1399

00:52:35,190 --> 00:52:32,720

skeptics in the pub

1400

00:52:38,230 --> 00:52:35,200

special meeting with pamela gay on the

1401

00:52:40,069 --> 00:52:38,240

15th and the chocolate dinner talk on

1402

00:52:41,510 --> 00:52:40,079

the 28th

1403

00:52:43,349 --> 00:52:41,520

not to be missed

1404

00:52:48,870 --> 00:52:43,359

but for this week with one more roll of

1405

00:52:53,990 --> 00:52:51,990

okay these things happen 15 again this

1406

00:52:57,910 --> 00:52:54,000

is richard saunders signing off from

1407

00:52:57,920 --> 00:53:02,870

11.

1408

00:53:06,069 --> 00:53:04,549

you've been listening to the skeptic

1409

00:53:10,950 --> 00:53:06,079

zone