



Episode **578**

THE
**SKEPTIC
ZONE**
PODCAST

10 November 2019

www.skepticzone.tv

The Skeptic Zone Podcast
Episode 578 - 10 November 2019



The Skeptic Zone Podcast
Episode 578 - 10 November 2019



Rob Palmer
CSICon interviews part #3

M 209 Cipher Machine
with Dr Steve Roberts

Tim Mendham
The Hole in the Pole part #1

Skepticon 2019
with Michelle Bijkersma

The Skeptic Zone Podcast
Episode 578 - 10 November 2019



1
00:00:08,470 --> 00:00:06,630

[Music]

2
00:00:11,270 --> 00:00:08,480
welcome to the skeptic zone

3
00:00:16,840 --> 00:00:11,280
the podcast from australia for science

4
00:00:23,830 --> 00:00:16,850
and reason

5
00:00:27,630 --> 00:00:25,830
yes it's the skeptic's own podcast

6
00:00:32,150 --> 00:00:27,640
episode number

7
00:00:33,910 --> 00:00:32,160
578 for the 10th of november 2019

8
00:00:35,590 --> 00:00:33,920
richard saunders here with you from

9
00:00:37,270 --> 00:00:35,600
sydney australia

10
00:00:39,510 --> 00:00:37,280
coming up on the skeptic zone this week

11
00:00:41,350 --> 00:00:39,520
part three of the cycon interviews with

12
00:00:42,790 --> 00:00:41,360
rob palmer

13
00:00:44,549 --> 00:00:42,800

and thank you very much to rob for

14

00:00:46,709 --> 00:00:44,559

taking the time out

15

00:00:48,709 --> 00:00:46,719

during cycon to do these interviews so

16

00:00:51,510 --> 00:00:48,719

we could all enjoy

17

00:00:53,189 --> 00:00:51,520

hearing from various people and speakers

18

00:00:55,590 --> 00:00:53,199

who were there

19

00:00:57,510 --> 00:00:55,600

following that i talked to dr steve

20

00:01:00,549 --> 00:00:57,520

roberts a very

21

00:01:02,310 --> 00:01:00,559

long time member of the skeptical

22

00:01:05,270 --> 00:01:02,320

community here in australia

23

00:01:06,230 --> 00:01:05,280

now dr steve used to work as a code

24

00:01:08,070 --> 00:01:06,240

breaker

25

00:01:09,270 --> 00:01:08,080

and he has in his possession a wonderful

26

00:01:11,429 --> 00:01:09,280

bit of kit

27

00:01:12,870 --> 00:01:11,439

a wonderful bit of machinery called the

28

00:01:15,910 --> 00:01:12,880

m209

29

00:01:17,749 --> 00:01:15,920

cipher machine from world war ii and

30

00:01:20,630 --> 00:01:17,759

this is what the americans

31

00:01:22,230 --> 00:01:20,640

used uh while the germans were using the

32

00:01:25,670 --> 00:01:22,240

famous enigma

33

00:01:28,310 --> 00:01:25,680

the americans were using the m209

34

00:01:29,350 --> 00:01:28,320

and i got to use one when visiting steve

35

00:01:31,990 --> 00:01:29,360

roberts in fact

36

00:01:33,670 --> 00:01:32,000

he bought his particular one from dr

37

00:01:37,190 --> 00:01:33,680

simon singh

38

00:01:39,190 --> 00:01:37,200

the famous british skeptic and brilliant

39

00:01:42,310 --> 00:01:39,200

author

40

00:01:44,149 --> 00:01:42,320

anyway a little bit of a variation this

41

00:01:46,149 --> 00:01:44,159

week in the skeptic zone as we look at

42

00:01:48,469 --> 00:01:46,159

the m209

43

00:01:50,069 --> 00:01:48,479

cipher machine following that it's tim

44

00:01:51,749 --> 00:01:50,079

mendom the editor of the

45

00:01:53,510 --> 00:01:51,759

skeptic the journal from australian

46

00:01:56,389 --> 00:01:53,520

skeptics with part one

47

00:01:57,670 --> 00:01:56,399

of a new series called the hole in the

48

00:02:00,069 --> 00:01:57,680

pole

49

00:02:00,789 --> 00:02:00,079

and this is all about people who think

50

00:02:04,709 --> 00:02:00,799

the earth

51
00:02:07,270 --> 00:02:04,719
is hollow not flat

52
00:02:09,510 --> 00:02:07,280
no no no not flattered the earth is

53
00:02:12,949 --> 00:02:09,520
obviously a globe

54
00:02:14,790 --> 00:02:12,959
but it's hollow inside then to round off

55
00:02:17,430 --> 00:02:14,800
the show we chat to michelle bickers ma

56
00:02:17,990 --> 00:02:17,440
from the vic skeptics about some of the

57
00:02:22,070 --> 00:02:18,000
guests

58
00:02:25,589 --> 00:02:22,080
coming along to skepticon 2019

59
00:02:28,229 --> 00:02:25,599
a very short few weeks away

60
00:02:29,910 --> 00:02:28,239
international and local speakers galore

61
00:02:32,550 --> 00:02:29,920
now you might remember on last week's

62
00:02:36,150 --> 00:02:32,560
episode we spoke to michael marshall

63
00:02:38,550 --> 00:02:36,160

about moves in the uk to put another

64

00:02:41,190 --> 00:02:38,560

nail in the coffin of homeopathy

65

00:02:43,670 --> 00:02:41,200

i mean homeopathy is it's the corpse

66

00:02:45,350 --> 00:02:43,680

that keeps on reanimating it's dead

67

00:02:47,830 --> 00:02:45,360

it's not quite buried though i mean it

68

00:02:49,589 --> 00:02:47,840

was never alive

69

00:02:51,350 --> 00:02:49,599

you can't kill something that was never

70

00:02:53,589 --> 00:02:51,360

alive

71

00:02:55,670 --> 00:02:53,599

hmm but in the past week more

72

00:02:57,509 --> 00:02:55,680

information has come to light

73

00:02:59,589 --> 00:02:57,519

and i'll link to this in the show notes

74

00:03:02,630 --> 00:02:59,599

where some reporters went to visit

75

00:03:04,309 --> 00:03:02,640

various homeopaths with sneaky cameras

76

00:03:06,550 --> 00:03:04,319

something you can't do in australia

77

00:03:09,350 --> 00:03:06,560

anymore you can't wear a hidden

78

00:03:10,630 --> 00:03:09,360

recording device a hidden camera and um

79

00:03:13,110 --> 00:03:10,640

bust people

80

00:03:14,630 --> 00:03:13,120

in the old days years ago and even

81

00:03:16,149 --> 00:03:14,640

members of australian skeptics were

82

00:03:18,229 --> 00:03:16,159

involved with some

83

00:03:20,470 --> 00:03:18,239

similar sort of thing uh visiting

84

00:03:23,430 --> 00:03:20,480

naturopaths with hidden cameras to hear

85

00:03:24,949 --> 00:03:23,440

them give outrageous advice well in the

86

00:03:27,830 --> 00:03:24,959

uk you still can

87

00:03:29,910 --> 00:03:27,840

and various reporters went undercover to

88

00:03:33,350 --> 00:03:29,920

seek the advice of homeopaths when it

89

00:03:35,910 --> 00:03:33,360

came to vaccination and it's a disgrace

90

00:03:37,910 --> 00:03:35,920

that these homeopaths it's no surprise

91

00:03:39,110 --> 00:03:37,920

it's fully expected but it's a disgrace

92

00:03:41,270 --> 00:03:39,120

that they would be telling

93

00:03:43,589 --> 00:03:41,280

people not to vaccinate their children

94

00:03:44,830 --> 00:03:43,599

and vaccination leads to autism and all

95

00:03:48,390 --> 00:03:44,840

the

96

00:03:49,030 --> 00:03:48,400

conspiratorial um conspiratorial twaddle

97

00:03:50,630 --> 00:03:49,040

we've uh

98

00:03:52,869 --> 00:03:50,640

we've heard but these homeopaths of

99

00:03:55,110 --> 00:03:52,879

course believe it lock

100

00:03:56,789 --> 00:03:55,120

stock and barrel anyway i'll link to

101

00:03:58,470 --> 00:03:56,799

that story in the show notes

102

00:04:01,190 --> 00:03:58,480

and now it's time for me to run

103

00:04:04,869 --> 00:04:01,200

downstairs and have some nice

104

00:04:09,910 --> 00:04:04,879

cheddar cheese with chili

105

00:04:11,910 --> 00:04:09,920

and maybe a little bit of chocolate what

106

00:04:12,789 --> 00:04:11,920

do you think while i do that i hope you

107

00:04:14,210 --> 00:04:12,799

enjoy

108

00:04:31,830 --> 00:04:14,220

the skeptic zone

109

00:04:36,230 --> 00:04:34,230

hi this is rob palmer i write for the

110

00:04:37,110 --> 00:04:36,240

skeptical inquirer as the well-known

111

00:04:40,469 --> 00:04:37,120

skeptic

112

00:04:41,749 --> 00:04:40,479

on wikipedia teams

113

00:04:43,110 --> 00:04:41,759

you may have also heard one of the

114

00:04:44,710 --> 00:04:43,120

promos i produced for the guerrilla

115

00:04:46,870 --> 00:04:44,720

skeptics played right here on the

116

00:04:48,230 --> 00:04:46,880

skeptic zone

117

00:04:50,230 --> 00:04:48,240

this week i'm bringing you the third

118

00:04:53,430 --> 00:04:50,240

part of my interview series from cycon

119

00:04:55,270 --> 00:04:53,440

2019 in las vegas nevada

120

00:04:57,430 --> 00:04:55,280

i talk with former ghost hunter turned

121

00:04:58,230 --> 00:04:57,440

legitimate paranormal investigator kenny

122

00:05:01,430 --> 00:04:58,240

biddle

123

00:05:04,469 --> 00:05:01,440

science mom and point of inquiry co-host

124

00:05:06,230 --> 00:05:04,479

calvin cenapathy a wikipedia editor

125

00:05:08,310 --> 00:05:06,240

who is my guerrilla skeptic teammate

126

00:05:10,710 --> 00:05:08,320

brandy along with her son aiden

127

00:05:15,660 --> 00:05:10,720

and a las vegas stem student daniel

128

00:05:19,110 --> 00:05:17,350

[Music]

129

00:05:21,350 --> 00:05:19,120

i ran into kenny biddle who was the

130

00:05:23,029 --> 00:05:21,360

second half of the team that did the

131

00:05:26,230 --> 00:05:23,039

investigators workshop

132

00:05:28,070 --> 00:05:26,240

so let me ask him about his experience

133

00:05:29,510 --> 00:05:28,080

giving that presentation at cycon first

134

00:05:32,710 --> 00:05:29,520

off introduce yourself hi

135

00:05:34,790 --> 00:05:32,720

i'm kenny biddle i introduce myself

136

00:05:37,029 --> 00:05:34,800

and what are you known for uh i actually

137

00:05:39,430 --> 00:05:37,039

do paranormal investigations

138

00:05:40,550 --> 00:05:39,440

pretty much from a scientific scientific

139

00:05:42,150 --> 00:05:40,560

and skeptical point of view

140

00:05:43,990 --> 00:05:42,160

i heard a rumor that you were once a

141

00:05:44,469 --> 00:05:44,000

ghost hunter and you used to believe in

142

00:05:47,189 --> 00:05:44,479

them

143

00:05:48,310 --> 00:05:47,199

yes i in the early 90s i was a ghost

144

00:05:50,390 --> 00:05:48,320

hunter i believed

145

00:05:51,749 --> 00:05:50,400

in everything ghost and loch ness

146

00:05:54,469 --> 00:05:51,759

monster bigfoot

147

00:05:55,029 --> 00:05:54,479

ufos i believed all of it so so they

148

00:05:56,629 --> 00:05:55,039

always say

149

00:05:57,749 --> 00:05:56,639

people like that aren't very intelligent

150

00:05:59,029 --> 00:05:57,759

but here you are on the other side of

151

00:06:00,550 --> 00:05:59,039

the fence did you get like a lot more

152

00:06:02,790 --> 00:06:00,560

brain matter or something

153

00:06:04,870 --> 00:06:02,800

it was the i guess the curiosity because

154

00:06:08,230 --> 00:06:04,880

i had always heard about the skeptics

155

00:06:10,150 --> 00:06:08,240

and when you're a die-hard ghost hunter

156

00:06:12,230 --> 00:06:10,160

skeptics are like the evil people they

157

00:06:15,749 --> 00:06:12,240

were the arch nemesis oh because we are

158

00:06:18,390 --> 00:06:15,759

yes and but i reached out to a few

159

00:06:19,909 --> 00:06:18,400

in particular ben rafford uh he was the

160

00:06:20,230 --> 00:06:19,919

first person that i really interacted

161

00:06:22,710 --> 00:06:20,240

with

162

00:06:24,070 --> 00:06:22,720

i think i know him among yeah i kind of

163

00:06:26,870 --> 00:06:24,080

know him too you know

164

00:06:28,469 --> 00:06:26,880

but uh yeah he he's uh an editor at

165

00:06:29,990 --> 00:06:28,479

amongst other things but he's an editor

166

00:06:30,550 --> 00:06:30,000

for skeptical inquirer magazine by the

167

00:06:33,029 --> 00:06:30,560

way

168

00:06:34,070 --> 00:06:33,039

which we both write for yes our editors

169

00:06:35,830 --> 00:06:34,080

so when we write an article

170

00:06:38,629 --> 00:06:35,840

before you see it yeah ben's gone over

171

00:06:40,629 --> 00:06:38,639

it so yeah that was um

172

00:06:42,790 --> 00:06:40,639

i talked to him for a little bit i sent

173

00:06:44,150 --> 00:06:42,800

him some things that i had he gave me

174

00:06:45,990 --> 00:06:44,160

explanations he

175

00:06:48,550 --> 00:06:46,000

really took the time to break it down

176

00:06:51,670 --> 00:06:48,560

for me and he was not mean

177

00:06:54,950 --> 00:06:51,680

uh so he wasn't what i thought

178

00:06:56,469 --> 00:06:54,960

a skeptic was and it really it changed

179

00:06:59,110 --> 00:06:56,479

my opinion of skeptics

180

00:06:59,909 --> 00:06:59,120

and made me want more to learn more

181

00:07:01,350 --> 00:06:59,919

about

182

00:07:02,950 --> 00:07:01,360

what they do that's impressive i wrote

183

00:07:04,309 --> 00:07:02,960

your computer article never even came

184

00:07:05,510 --> 00:07:04,319

across that little bit that yeah but

185

00:07:07,749 --> 00:07:05,520

that wasn't written down anywhere

186

00:07:09,670 --> 00:07:07,759

it was it was really good and then i i

187

00:07:12,469 --> 00:07:09,680

mean i discovered more stuff from

188

00:07:13,510 --> 00:07:12,479

not only ben but joe nickel and then

189

00:07:15,909 --> 00:07:13,520

like sharon hill

190

00:07:17,110 --> 00:07:15,919

i talked to her for a long time and

191

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

actually worked on some projects with

192

00:07:20,550 --> 00:07:17,440

her

193

00:07:22,950 --> 00:07:20,560

podcast 15

194

00:07:24,309 --> 00:07:22,960

credibility street which is defunct now

195

00:07:25,189 --> 00:07:24,319

actually right yeah right she doesn't do

196

00:07:27,589 --> 00:07:25,199

it anymore

197

00:07:28,309 --> 00:07:27,599

but uh i hadn't helped with some of her

198

00:07:30,390 --> 00:07:28,319

stuff i've

199

00:07:31,589 --> 00:07:30,400

written a part of a chapter for ben

200

00:07:33,510 --> 00:07:31,599

raffert's new book

201

00:07:35,029 --> 00:07:33,520

is a well his one book about

202

00:07:37,510 --> 00:07:35,039

investigating ghosts

203

00:07:38,870 --> 00:07:37,520

so i've had my hand in a few things

204

00:07:41,589 --> 00:07:38,880

since then and

205

00:07:42,230 --> 00:07:41,599

this is my third year presenting it's

206

00:07:45,270 --> 00:07:42,240

icon

207

00:07:47,350 --> 00:07:45,280

wow so i'm i'm i feel actually

208

00:07:48,469 --> 00:07:47,360

like honored and humbled that i i keep

209

00:07:50,869 --> 00:07:48,479

getting asked back

210

00:07:51,670 --> 00:07:50,879

very nice so you're one year ahead of me

211

00:07:53,589 --> 00:07:51,680

but you know

212

00:07:55,110 --> 00:07:53,599

i'm just in the sunday papers and we're

213

00:07:56,150 --> 00:07:55,120

not asked we have to fight for the spot

214

00:07:59,749 --> 00:07:56,160

so fight for it

215

00:08:01,589 --> 00:07:59,759

it's not quite the same thing so okay

216

00:08:03,270 --> 00:08:01,599

you know the the zag they have they have

217

00:08:05,270 --> 00:08:03,280

uh bottles of wine here engraved with

218

00:08:09,350 --> 00:08:05,280

the names of all the speakers on it

219

00:08:11,350 --> 00:08:09,360

but not the sunday paper speakers so

220

00:08:13,830 --> 00:08:11,360

i'm sorry i have no comment on that

221

00:08:15,909 --> 00:08:13,840

because i have one with my youtube

222

00:08:17,830 --> 00:08:15,919

which i rearranged and put right in

223

00:08:20,390 --> 00:08:17,840

front everybody can see

224

00:08:21,270 --> 00:08:20,400

very good all right kenny thank you very

225

00:08:24,469 --> 00:08:21,280

much for your time

226

00:08:27,909 --> 00:08:26,710

well i wandered into this icon book sale

227

00:08:30,390 --> 00:08:27,919

room and i found

228

00:08:31,830 --> 00:08:30,400

yet another speaker for the conference

229

00:08:35,269 --> 00:08:31,840

can you introduce yourself

230

00:08:37,110 --> 00:08:35,279

hi this is kevin sinopathy and where

231

00:08:38,469 --> 00:08:37,120

may the listeners to the skeptic zone

232

00:08:41,589 --> 00:08:38,479

know your voice from

233

00:08:43,670 --> 00:08:41,599

they might know my voice from the point

234

00:08:46,470 --> 00:08:43,680

of inquiry podcast

235

00:08:47,470 --> 00:08:46,480

or they may know my work writing for a

236

00:08:50,389 --> 00:08:47,480

slew of

237

00:08:52,030 --> 00:08:50,399

organizations uh including the one that

238

00:08:54,230 --> 00:08:52,040

i co-founded

239

00:08:55,829 --> 00:08:54,240

scimoms.com and also a little

240

00:08:59,190 --> 00:08:55,839

documentary regarding simon

241

00:09:02,070 --> 00:08:59,200

yeah uh actually sai mom's was a

242

00:09:04,710 --> 00:09:02,080

shoot-off project from the science mom's

243

00:09:07,430 --> 00:09:04,720

documentary it's a 30-minute documentary

244

00:09:10,630 --> 00:09:07,440

that came out in 2017

245

00:09:11,350 --> 00:09:10,640

and it follows me and four other science

246

00:09:13,670 --> 00:09:11,360

moms

247

00:09:15,110 --> 00:09:13,680

three of them are scientists two of us

248

00:09:18,150 --> 00:09:15,120

are writers slash

249

00:09:19,269 --> 00:09:18,160

journalists communicators but it takes

250

00:09:22,389 --> 00:09:19,279

us

251
00:09:25,430 --> 00:09:22,399
or the the documentary takes the viewers

252
00:09:28,550 --> 00:09:25,440
through our sort of quest to

253
00:09:31,190 --> 00:09:28,560
figure out how to parent our kids with

254
00:09:32,070 --> 00:09:31,200
evidence whenever possible and it covers

255
00:09:34,310 --> 00:09:32,080
some of the

256
00:09:36,630 --> 00:09:34,320
most fraught current issues when it

257
00:09:39,670 --> 00:09:36,640
comes to parenting including

258
00:09:43,590 --> 00:09:39,680
vaccines homeopathy

259
00:09:46,150 --> 00:09:43,600
and gmos and of course gwyneth paltrow

260
00:09:46,790 --> 00:09:46,160
oh we all love it but but you can

261
00:09:49,269 --> 00:09:46,800
actually

262
00:09:50,710 --> 00:09:49,279
get it for free on youtube it's called

263
00:09:54,790 --> 00:09:50,720

science moms

264

00:09:58,389 --> 00:09:54,800

and um we cover a lot more

265

00:10:00,550 --> 00:09:58,399

i mean the the themes on scimoms.com

266

00:10:01,750 --> 00:10:00,560

are quite similar to science moms but we

267

00:10:05,269 --> 00:10:01,760

just cover so much

268

00:10:07,030 --> 00:10:05,279

more subject matter um on our website

269

00:10:08,310 --> 00:10:07,040

i can highly recommend the documentary i

270

00:10:10,870 --> 00:10:08,320

saw the screening at the

271

00:10:12,389 --> 00:10:10,880

cycon that coven mentioned and i

272

00:10:13,590 --> 00:10:12,399

actually went home and wrote a wikipedia

273

00:10:15,590 --> 00:10:13,600

article for it

274

00:10:17,269 --> 00:10:15,600

so you can look it up um so what's your

275

00:10:20,710 --> 00:10:17,279

presentation here going to be about

276

00:10:23,829 --> 00:10:20,720

my presentation is on the overblown

277

00:10:27,430 --> 00:10:23,839

breast is best mantra

278

00:10:30,949 --> 00:10:27,440

and breast is best is the slogans

279

00:10:33,750 --> 00:10:30,959

surrounding the idea that all infants

280

00:10:35,430 --> 00:10:33,760

across the board should be exclusively

281

00:10:38,389 --> 00:10:35,440

breastfed that means

282

00:10:39,430 --> 00:10:38,399

no other liquids for the first six

283

00:10:42,550 --> 00:10:39,440

months of life

284

00:10:44,710 --> 00:10:42,560

starting immediately from birth until

285

00:10:47,670 --> 00:10:44,720

the time of introducing

286

00:10:48,389 --> 00:10:47,680

complementary foods and it's quite a pro

287

00:10:51,670 --> 00:10:48,399

popular

288

00:10:54,069 --> 00:10:51,680

idea and there's

289

00:10:56,150 --> 00:10:54,079

hospital policy and maternity ward

290

00:10:59,269 --> 00:10:56,160

policy around the world

291

00:11:02,949 --> 00:10:59,279

based on this idea so i'm gonna

292

00:11:05,910 --> 00:11:02,959

break down the the science of it um

293

00:11:09,030 --> 00:11:05,920

some of the misconceptions and

294

00:11:12,310 --> 00:11:09,040

eventually i'm going to make a case for

295

00:11:13,509 --> 00:11:12,320

fully informed choice for parents when

296

00:11:15,509 --> 00:11:13,519

it comes to how

297

00:11:17,110 --> 00:11:15,519

they feed their babies great i'm looking

298

00:11:22,150 --> 00:11:17,120

forward to it okay

299

00:11:25,590 --> 00:11:24,870

so it's the last day of the conference

300

00:11:28,150 --> 00:11:25,600

and

301

00:11:30,230 --> 00:11:28,160

i'm talking to a new guerrilla skeptics

302

00:11:30,710 --> 00:11:30,240

on wikipedia editor who came to her very

303

00:11:32,230 --> 00:11:30,720

first

304

00:11:33,829 --> 00:11:32,240

cycon and she's with her son could you

305

00:11:38,150 --> 00:11:33,839

guys introduce yourself

306

00:11:40,389 --> 00:11:38,160

hi my name is brandi hi my name is aiden

307

00:11:41,670 --> 00:11:40,399

and why did you decide to come to the

308

00:11:44,949 --> 00:11:41,680

conference

309

00:11:48,389 --> 00:11:44,959

well i've been listening to

310

00:11:51,190 --> 00:11:48,399

skeptical podcasts for many many years

311

00:11:51,990 --> 00:11:51,200

and decided i wanted to get involved

312

00:11:54,870 --> 00:11:52,000

somehow

313

00:11:56,389 --> 00:11:54,880

and i heard about the conference and it

314

00:11:59,509 --> 00:11:56,399

sounded really interesting

315

00:12:02,470 --> 00:11:59,519

a lot of really interesting speakers

316

00:12:03,350 --> 00:12:02,480

and i dragged my son along because he's

317

00:12:05,910 --> 00:12:03,360

been a fan

318

00:12:07,110 --> 00:12:05,920

of brian greene since he was in

319

00:12:08,829 --> 00:12:07,120

elementary school

320

00:12:10,230 --> 00:12:08,839

oh satan what did you think of his

321

00:12:13,350 --> 00:12:10,240

presentation

322

00:12:14,710 --> 00:12:13,360

it was a really great when did when did

323

00:12:17,670 --> 00:12:14,720

you stop following it because i stopped

324

00:12:20,069 --> 00:12:17,680

following it when he got to the hologram

325

00:12:20,949 --> 00:12:20,079

that the universe is actually a hologram

326

00:12:23,350 --> 00:12:20,959

it's like

327

00:12:25,030 --> 00:12:23,360

like when i really started like getting

328

00:12:26,629 --> 00:12:25,040

it in

329

00:12:28,230 --> 00:12:26,639

because like black holes have always

330

00:12:30,230 --> 00:12:28,240

been like a cool subject that i've

331

00:12:32,389 --> 00:12:30,240

always been interested in

332

00:12:33,590 --> 00:12:32,399

i thought of like something being so

333

00:12:37,269 --> 00:12:33,600

dense and heavy that

334

00:12:39,430 --> 00:12:37,279

just collapses in on itself and can trap

335

00:12:40,470 --> 00:12:39,440

anything in it it's always fascinated me

336

00:12:42,629 --> 00:12:40,480

that was amazing

337

00:12:44,949 --> 00:12:42,639

don't tell them about the uh the little

338

00:12:46,629 --> 00:12:44,959

artifact that they had that described

339

00:12:48,629 --> 00:12:46,639

all right they had like a tiny little

340

00:12:49,430 --> 00:12:48,639

marble you know supposed to represent

341

00:12:52,710 --> 00:12:49,440

the size

342

00:12:54,870 --> 00:12:52,720

of the earth if it was a black hole yeah

343

00:12:55,750 --> 00:12:54,880

that was like it drew it drew gasps from

344

00:12:58,069 --> 00:12:55,760

everybody

345

00:12:59,110 --> 00:12:58,079

and then einstein didn't believe in

346

00:13:01,350 --> 00:12:59,120

black holes because he said there was no

347

00:13:04,389 --> 00:13:01,360

way that that could possibly happen

348

00:13:05,590 --> 00:13:04,399

but now we know there is fascinating

349

00:13:07,670 --> 00:13:05,600

well so what do you think you're going

350

00:13:10,230 --> 00:13:07,680

to come back next year yeah

351
00:13:11,430 --> 00:13:10,240
and i was happy to see that my son was

352
00:13:13,829 --> 00:13:11,440
uh interested

353
00:13:14,710 --> 00:13:13,839
in all the talks that he saw today not

354
00:13:17,430 --> 00:13:14,720
just

355
00:13:18,230 --> 00:13:17,440
in brian greene and he's agreed to come

356
00:13:21,509 --> 00:13:18,240
with me

357
00:13:22,470 --> 00:13:21,519
again sometime fantastic very glad to

358
00:13:24,470 --> 00:13:22,480
hear that

359
00:13:28,230 --> 00:13:24,480
okay so we'll be looking forward to

360
00:13:31,990 --> 00:13:30,470
all right so i've come to two previous

361
00:13:32,870 --> 00:13:32,000
icons this is my third in a row and this

362
00:13:35,269 --> 00:13:32,880
is the first time

363
00:13:36,150 --> 00:13:35,279

i've experienced what is going on at

364

00:13:39,189 --> 00:13:36,160

this one

365

00:13:41,030 --> 00:13:39,199

which is that a nearby school has sent

366

00:13:43,590 --> 00:13:41,040

some students to cycon

367

00:13:45,430 --> 00:13:43,600

to uh to participate in the conference

368

00:13:47,430 --> 00:13:45,440

and i just ran into one of them so i

369

00:13:49,829 --> 00:13:47,440

wanted to get some information

370

00:13:50,949 --> 00:13:49,839

like what's your name daniel spangler

371

00:13:51,430 --> 00:13:50,959

and what's what's the school you come

372

00:13:54,389 --> 00:13:51,440

from

373

00:13:56,230 --> 00:13:54,399

coral academy of science las vegas okay

374

00:13:58,470 --> 00:13:56,240

is that nearby

375

00:14:00,150 --> 00:13:58,480

it's uh it's in henderson so it's like

376

00:14:02,150 --> 00:14:00,160

probably 30 minutes away from

377

00:14:03,509 --> 00:14:02,160

oh not too bad and so how did you find

378

00:14:04,230 --> 00:14:03,519

out that this was an available thing to

379

00:14:06,550 --> 00:14:04,240

do and come

380

00:14:08,949 --> 00:14:06,560

to the conference and by the way this is

381

00:14:09,990 --> 00:14:08,959

being paid by donations by conference

382

00:14:12,790 --> 00:14:10,000

attendees and

383

00:14:14,389 --> 00:14:12,800

others who uh who helped with the uh

384

00:14:16,550 --> 00:14:14,399

raising money

385

00:14:17,910 --> 00:14:16,560

it was really like out of the blues like

386

00:14:19,750 --> 00:14:17,920

two days ago

387

00:14:21,990 --> 00:14:19,760

that all the teachers got an email and

388

00:14:22,550 --> 00:14:22,000

they recommended some students to go to

389

00:14:25,990 --> 00:14:22,560

this

390

00:14:27,670 --> 00:14:26,000

just two days ago yeah and they gave it

391

00:14:29,350 --> 00:14:27,680

they gave me the permission slip on

392

00:14:30,310 --> 00:14:29,360

thursday and it just looked really

393

00:14:32,550 --> 00:14:30,320

interesting

394

00:14:34,870 --> 00:14:32,560

so i got it signed so did everyone have

395

00:14:37,030 --> 00:14:34,880

the option to sign up and it was just

396

00:14:38,470 --> 00:14:37,040

a number what how'd that go do you

397

00:14:40,069 --> 00:14:38,480

remember the teachers were supposed to

398

00:14:44,069 --> 00:14:40,079

recommend two students

399

00:14:46,230 --> 00:14:44,079

each in each class so it was like

400

00:14:47,990 --> 00:14:46,240

i guess you could say that yeah what

401
00:14:48,710 --> 00:14:48,000
criteria was it people who are great in

402
00:14:50,470 --> 00:14:48,720
science or

403
00:14:51,910 --> 00:14:50,480
what do you think yeah pay attention

404
00:14:55,829 --> 00:14:51,920
just good students overall

405
00:14:58,389 --> 00:14:55,839
oh cool so what made you uh want to come

406
00:14:59,590 --> 00:14:58,399
i i've never been to like one of these

407
00:15:00,790 --> 00:14:59,600
types of meetings

408
00:15:02,870 --> 00:15:00,800
and i just thought it'd be really

409
00:15:06,150 --> 00:15:02,880
interesting to go and get

410
00:15:07,430 --> 00:15:06,160
different viewpoints on everything

411
00:15:09,269 --> 00:15:07,440
do you know all the other people you've

412
00:15:11,110 --> 00:15:09,279
come with is it a small school

413
00:15:12,949 --> 00:15:11,120

yeah it's pretty small there's like a

414

00:15:14,870 --> 00:15:12,959

hundred people in my class

415

00:15:16,470 --> 00:15:14,880

oh and i heard also that they did some

416

00:15:17,750 --> 00:15:16,480

people from here went to the school to

417

00:15:19,110 --> 00:15:17,760

do presentations because

418

00:15:21,269 --> 00:15:19,120

there's only a limited number that they

419

00:15:22,150 --> 00:15:21,279

could have come here did you attend any

420

00:15:23,750 --> 00:15:22,160

of those

421

00:15:25,590 --> 00:15:23,760

no okay so it wasn't everyone at the

422

00:15:27,430 --> 00:15:25,600

school oh actually yeah

423

00:15:28,790 --> 00:15:27,440

there was a presentation in my history

424

00:15:31,910 --> 00:15:28,800

class about

425

00:15:33,590 --> 00:15:31,920

i forgot his name he does like ghost he

426

00:15:35,509 --> 00:15:33,600

used to do ghost hunting things

427

00:15:37,030 --> 00:15:35,519

kenny biddle yeah kenny bill gave that

428

00:15:37,749 --> 00:15:37,040

presentation oh so you saw that one okay

429

00:15:39,749 --> 00:15:37,759

yeah

430

00:15:41,910 --> 00:15:39,759

it is really interesting how like he

431

00:15:43,990 --> 00:15:41,920

just broke down ghosts and

432

00:15:45,030 --> 00:15:44,000

was able to explain everything did you

433

00:15:46,790 --> 00:15:45,040

believe in them before

434

00:15:48,389 --> 00:15:46,800

do you not now did it change your mind i

435

00:15:51,189 --> 00:15:48,399

didn't believe in them before

436

00:15:52,870 --> 00:15:51,199

but now i definitely okay he's gonna be

437

00:15:56,150 --> 00:15:52,880

glad

438

00:15:57,670 --> 00:15:56,160

he's yes i know him personally and he

439

00:15:58,870 --> 00:15:57,680

worked in the industry thinking there

440

00:16:00,150 --> 00:15:58,880

were ghosts trying to prove there were

441

00:16:03,030 --> 00:16:00,160

ghosts for a long time

442

00:16:04,949 --> 00:16:03,040

and came to the conclusion no this is

443

00:16:07,350 --> 00:16:04,959

all bull

444

00:16:08,629 --> 00:16:07,360

very good all right well so uh thanks

445

00:16:09,110 --> 00:16:08,639

for doing this and enjoy the rest of the

446

00:16:13,290 --> 00:16:09,120

conference

447

00:16:18,629 --> 00:16:17,030

[Music]

448

00:16:20,710 --> 00:16:18,639

that was the final part of my interview

449

00:16:22,470 --> 00:16:20,720

series from cycon 2019. i hope you

450

00:16:24,150 --> 00:16:22,480

enjoyed listening as much as i enjoyed

451
00:16:25,430 --> 00:16:24,160
doing those interviews

452
00:16:26,710 --> 00:16:25,440
i'm about to publish an article

453
00:16:28,389 --> 00:16:26,720
interviewing first time cycling

454
00:16:29,990 --> 00:16:28,399
attendees and speakers

455
00:16:31,670 --> 00:16:30,000
follow me on facebook so you don't miss

456
00:16:34,310 --> 00:16:31,680
it in other related articles published

457
00:16:36,069 --> 00:16:34,320
in my skeptical inquirer online column

458
00:16:38,470 --> 00:16:36,079
links to my column and to my facebook

459
00:17:50,310 --> 00:16:38,480
page are in the show notes

460
00:18:04,230 --> 00:18:01,029
[Music]

461
00:18:05,990 --> 00:18:04,240
well folks i've met so many interesting

462
00:18:06,630 --> 00:18:06,000
people during my time in the skeptical

463
00:18:08,310 --> 00:18:06,640

movement

464

00:18:09,990 --> 00:18:08,320

and then there was steve roberts dr

465

00:18:13,190 --> 00:18:10,000

steve roberts but

466

00:18:15,750 --> 00:18:13,200

years ago dr steve you bought me a

467

00:18:17,430 --> 00:18:15,760

nice little present the code book by

468

00:18:19,110 --> 00:18:17,440

simon singh

469

00:18:20,870 --> 00:18:19,120

and i thought oh that's nice and i read

470

00:18:22,870 --> 00:18:20,880

it and my jaw dropped because i

471

00:18:25,510 --> 00:18:22,880

understood enigma and i thought

472

00:18:27,350 --> 00:18:25,520

what an amazing man simon singers to

473

00:18:27,990 --> 00:18:27,360

write a book in such a way that someone

474

00:18:31,350 --> 00:18:28,000

like me can

475

00:18:32,870 --> 00:18:31,360

understand and you and we've got right

476

00:18:35,350 --> 00:18:32,880

here in front of us folks

477

00:18:35,909 --> 00:18:35,360

you bought this from simon singh it's a

478

00:18:38,789 --> 00:18:35,919

code

479

00:18:39,350 --> 00:18:38,799

machine like enigma well you know sort

480

00:18:43,830 --> 00:18:39,360

of

481

00:18:44,470 --> 00:18:43,840

from world war ii it's the uh m209

482

00:18:47,669 --> 00:18:44,480

that's it

483

00:18:49,750 --> 00:18:47,679

the m209 cypher machine as used by the

484

00:18:51,669 --> 00:18:49,760

american army in world war ii

485

00:18:53,430 --> 00:18:51,679

it's amazing we're just looking at it

486

00:18:55,750 --> 00:18:53,440

right now well i would um

487

00:18:56,710 --> 00:18:55,760

i would recommend the code book by simon

488

00:18:58,710 --> 00:18:56,720

singh me too

489

00:19:00,710 --> 00:18:58,720

there are lots and lots of awful books

490

00:19:02,549 --> 00:19:00,720

about codes and ciphers out there but

491

00:19:04,470 --> 00:19:02,559

simon singe has written a

492

00:19:06,950 --> 00:19:04,480

really really good book he's got 10

493

00:19:08,830 --> 00:19:06,960

chapters and the codes start from

494

00:19:09,990 --> 00:19:08,840

extremely elementary to extremely

495

00:19:11,430 --> 00:19:10,000

complicated

496

00:19:13,590 --> 00:19:11,440

and you can actually work through it and

497

00:19:15,110 --> 00:19:13,600

these gives examples and the last two

498

00:19:16,470 --> 00:19:15,120

chapters are quite difficult and there

499

00:19:18,390 --> 00:19:16,480

was a prize for

500

00:19:19,750 --> 00:19:18,400

cracking uh the last puzzle which

501
00:19:21,909 --> 00:19:19,760
somebody won

502
00:19:23,430 --> 00:19:21,919
but he does explain it extremely well

503
00:19:25,830 --> 00:19:23,440
he's very talented

504
00:19:26,549 --> 00:19:25,840
extremely well it's credit to simon

505
00:19:29,270 --> 00:19:26,559
singh for

506
00:19:30,870 --> 00:19:29,280
his wonderful uh work but look at this i

507
00:19:32,070 --> 00:19:30,880
i know i say look at this the audience

508
00:19:34,490 --> 00:19:32,080
can't look at this but we'll have to

509
00:19:35,830 --> 00:19:34,500
look at some other one have a look

510
00:19:37,350 --> 00:19:35,840
[Music]

511
00:19:39,510 --> 00:19:37,360
you check the wheel there setting the

512
00:19:41,190 --> 00:19:39,520
wheel right and then you turn the handle

513
00:19:43,350 --> 00:19:41,200

yeah

514

00:19:44,950 --> 00:19:43,360

and out pops another letter but you

515

00:19:48,710 --> 00:19:44,960

there's one two three four

516

00:19:50,870 --> 00:19:48,720

five six rotors you set those to a

517

00:19:54,070 --> 00:19:50,880

particular pattern at the moment it's p

518

00:19:58,150 --> 00:19:56,150

so you have got that pattern your

519

00:20:00,390 --> 00:19:58,160

counterpart who's receiving the final

520

00:20:01,830 --> 00:20:00,400

message will have that and he decodes it

521

00:20:03,510 --> 00:20:01,840

and the wheels have pins on them and you

522

00:20:04,390 --> 00:20:03,520

have to set the pins the same at both

523

00:20:06,470 --> 00:20:04,400

ends

524

00:20:08,630 --> 00:20:06,480

wow the great advantage with this thing

525

00:20:10,390 --> 00:20:08,640

is that it's all mechanical so

526

00:20:12,230 --> 00:20:10,400

unlike the enigma which lights up it

527

00:20:13,750 --> 00:20:12,240

needs an electric current to work and it

528

00:20:14,630 --> 00:20:13,760

lights up a little light behind the

529

00:20:16,470 --> 00:20:14,640

letter

530

00:20:17,590 --> 00:20:16,480

if the bulb blows while you're stuck and

531

00:20:18,789 --> 00:20:17,600

if you haven't got a battery you're

532

00:20:21,430 --> 00:20:18,799

totally stuck

533

00:20:22,549 --> 00:20:21,440

but the this thing the m209 is entirely

534

00:20:24,230 --> 00:20:22,559

mechanical

535

00:20:25,590 --> 00:20:24,240

um it's made by the company that used to

536

00:20:28,230 --> 00:20:25,600

make typewriters

537

00:20:28,630 --> 00:20:28,240

um that makes sense yeah you know you

538

00:20:30,470 --> 00:20:28,640

we've

539

00:20:32,310 --> 00:20:30,480

opened it up so we can look at the

540

00:20:33,270 --> 00:20:32,320

workings of this it's completely

541

00:20:35,990 --> 00:20:33,280

mechanical

542

00:20:37,190 --> 00:20:36,000

it's exquisitely made the engineering

543

00:20:39,350 --> 00:20:37,200

for 1942

544

00:20:40,390 --> 00:20:39,360

is exquisite yeah now what's this little

545

00:20:42,630 --> 00:20:40,400

countdown here mean

546

00:20:43,669 --> 00:20:42,640

that's the letter counter it says 603 at

547

00:20:47,190 --> 00:20:43,679

the moment if i

548

00:20:49,029 --> 00:20:47,200

inside for a letter 604

549

00:20:50,390 --> 00:20:49,039

that says how far you've got in this

550

00:20:52,310 --> 00:20:50,400

sequence of um

551
00:20:53,510 --> 00:20:52,320
letters so you can move that on from the

552
00:20:54,950 --> 00:20:53,520
initial setting

553
00:20:56,950 --> 00:20:54,960
and you must never incite it with the

554
00:20:57,590 --> 00:20:56,960
same setting twice so you always move it

555
00:21:00,470 --> 00:20:57,600
on

556
00:21:01,190 --> 00:21:00,480
and the other end understands that um so

557
00:21:04,870 --> 00:21:01,200
in the code

558
00:21:06,470 --> 00:21:04,880
world how how good was this code machine

559
00:21:08,230 --> 00:21:06,480
in world war ii was it

560
00:21:09,590 --> 00:21:08,240
secure enough or was it cracked

561
00:21:11,270 --> 00:21:09,600
eventually um

562
00:21:12,710 --> 00:21:11,280
it was it's crackable but it's good

563
00:21:14,230 --> 00:21:12,720

enough for a battle it'll take

564

00:21:15,909 --> 00:21:14,240

you know a day or so to crack the

565

00:21:17,510 --> 00:21:15,919

messages and that's something that's

566

00:21:19,430 --> 00:21:17,520

all you need that's pretty secure enough

567

00:21:21,350 --> 00:21:19,440

while you're being shot at

568

00:21:22,789 --> 00:21:21,360

yeah and you can also change the setting

569

00:21:24,230 --> 00:21:22,799

entirely you can move all these pins

570

00:21:25,590 --> 00:21:24,240

with a special tool

571

00:21:27,029 --> 00:21:25,600

and you can move all the lugs with the

572

00:21:28,390 --> 00:21:27,039

tool so if you have to abandon the

573

00:21:30,789 --> 00:21:28,400

machine you can actually

574

00:21:31,510 --> 00:21:30,799

completely reliably destroy the setting

575

00:21:33,909 --> 00:21:31,520

that it was

576

00:21:36,390 --> 00:21:33,919

had in it now unlike the enigma that had

577

00:21:37,909 --> 00:21:36,400

six wheels that had wiring in them

578

00:21:39,430 --> 00:21:37,919

and although you can smash them up you

579

00:21:41,110 --> 00:21:39,440

can recover the bits and work out what

580

00:21:41,990 --> 00:21:41,120

the wiring was and there were only six

581

00:21:46,149 --> 00:21:42,000

wheels

582

00:21:48,149 --> 00:21:46,159

you know you're

583

00:21:49,669 --> 00:21:48,159

a long way head towards solving it with

584

00:21:51,029 --> 00:21:49,679

this thing you can set the pattern to

585

00:21:52,870 --> 00:21:51,039

anything you like

586

00:21:54,310 --> 00:21:52,880

and destroy it and that pattern may

587

00:21:56,230 --> 00:21:54,320

never occur again

588

00:21:58,230 --> 00:21:56,240

it's fascinating i mean to look in into

589

00:21:59,990 --> 00:21:58,240

this thing is fascinating it's so

590

00:22:01,990 --> 00:22:00,000

beautifully made but to think this was

591

00:22:04,230 --> 00:22:02,000

used probably

592

00:22:05,909 --> 00:22:04,240

or conceivably in battle during world

593

00:22:08,950 --> 00:22:05,919

war ii to send

594

00:22:10,870 --> 00:22:08,960

important messages i asked steve

595

00:22:12,470 --> 00:22:10,880

to put in the message now please send

596

00:22:14,470 --> 00:22:12,480

more cheese because we're eating some

597

00:22:15,750 --> 00:22:14,480

nice cheese we send more cheese it comes

598

00:22:18,070 --> 00:22:15,760

out looking like gibberish yeah

599

00:22:19,830 --> 00:22:18,080

yeah so so the message coming out on the

600

00:22:23,190 --> 00:22:19,840

other end on a ticker tape

601
00:22:26,549 --> 00:22:23,200
yeah it looks like for example c t w p

602
00:22:28,149 --> 00:22:26,559
q q x n d p

603
00:22:29,750 --> 00:22:28,159
just just gibberish well the other guy

604
00:22:30,470 --> 00:22:29,760
would set his machine up and whack those

605
00:22:32,549 --> 00:22:30,480
letters in

606
00:22:34,630 --> 00:22:32,559
and then out on his tape would come see

607
00:22:37,190 --> 00:22:34,640
nd space mlre

608
00:22:37,750 --> 00:22:37,200
cheese yeah and they go oh look at that

609
00:22:46,149 --> 00:22:37,760
um

610
00:22:49,350 --> 00:22:47,909
and it's so compact i mean i can't

611
00:22:51,190 --> 00:22:49,360
believe how small this is

612
00:22:52,470 --> 00:22:51,200
you shut the lid as it would be the

613
00:22:55,669 --> 00:22:52,480

paper tape is included

614

00:22:57,750 --> 00:22:55,679

yeah and it's about what seven inches by

615

00:22:59,029 --> 00:22:57,760

five inches by four it's not that big

616

00:23:01,190 --> 00:22:59,039

yeah weighs about

617

00:23:02,070 --> 00:23:01,200

one kilogram yeah and he can stick it in

618

00:23:03,430 --> 00:23:02,080

a soldier's

619

00:23:05,029 --> 00:23:03,440

battle pack with all the other stuff

620

00:23:05,830 --> 00:23:05,039

he's got with his rations and whatnot

621

00:23:09,350 --> 00:23:05,840

and

622

00:23:11,750 --> 00:23:09,360

yeah it was

623

00:23:13,350 --> 00:23:11,760

they made thousands of these um they

624

00:23:16,149 --> 00:23:13,360

sell for about

625

00:23:17,590 --> 00:23:16,159

five thousand dollars on ebay um but the

626

00:23:18,870 --> 00:23:17,600

uniqueness sell for like a hundred

627

00:23:20,630 --> 00:23:18,880

thousand dollars because there's not

628

00:23:21,350 --> 00:23:20,640

many of them and they have that cachet

629

00:23:23,830 --> 00:23:21,360

of being

630

00:23:24,390 --> 00:23:23,840

cute but the elimi was a far worse

631

00:23:26,549 --> 00:23:24,400

machine

632

00:23:27,669 --> 00:23:26,559

cryptographically it was much easier to

633

00:23:29,510 --> 00:23:27,679

crack than this

634

00:23:31,029 --> 00:23:29,520

uh yeah this is much more secure than

635

00:23:32,549 --> 00:23:31,039

the enigma really yeah

636

00:23:34,870 --> 00:23:32,559

well the eating but you've only got six

637

00:23:36,789 --> 00:23:34,880

voters and we knew what the six voters

638

00:23:39,510 --> 00:23:36,799

were we'd be covered enough

639

00:23:41,190 --> 00:23:39,520

um and you just tried all the settings

640

00:23:42,710 --> 00:23:41,200

they had a machine that just tried all

641

00:23:45,909 --> 00:23:42,720

the settings there's only

642

00:23:47,750 --> 00:23:45,919

17 000 settings you can really do which

643

00:23:49,510 --> 00:23:47,760

seemed like a lot at the time but now

644

00:23:50,950 --> 00:23:49,520

for example 17 000 settings to be

645

00:23:53,430 --> 00:23:50,960

absolutely nothing

646

00:23:54,710 --> 00:23:53,440

um 17 trillion will actually still not

647

00:23:56,710 --> 00:23:54,720

be much of a headache

648

00:23:58,470 --> 00:23:56,720

um but yeah they just tried all the

649

00:24:00,070 --> 00:23:58,480

settings until one fell out and the

650

00:24:00,549 --> 00:24:00,080

thing is you had to make the messages

651
00:24:03,590 --> 00:24:00,559
within

652
00:24:04,390 --> 00:24:03,600
hours or it'd be no use yeah uh and that

653
00:24:06,390 --> 00:24:04,400
this was done

654
00:24:07,669 --> 00:24:06,400
in the in veterinary park this was you

655
00:24:08,870 --> 00:24:07,679
know they were working within hours and

656
00:24:11,269 --> 00:24:08,880
the message would have got out and the

657
00:24:12,710 --> 00:24:11,279
rest of the day's traffic would be red

658
00:24:13,990 --> 00:24:12,720
and then they'd change the settings

659
00:24:15,110 --> 00:24:14,000
again in the morning that will start all

660
00:24:16,710 --> 00:24:15,120
over again but

661
00:24:18,310 --> 00:24:16,720
the germans would send a weather message

662
00:24:20,470 --> 00:24:18,320
at five in the morning

663
00:24:21,750 --> 00:24:20,480

and there was obviously a great interest

664

00:24:22,310 --> 00:24:21,760

in breaking that one because that would

665

00:24:25,510 --> 00:24:22,320

give you that

666

00:24:28,789 --> 00:24:25,520

is it a urban myth or was it

667

00:24:31,990 --> 00:24:28,799

uh artistic license in the movie the

668

00:24:34,070 --> 00:24:32,000

imitation game yeah one of the clues

669

00:24:37,350 --> 00:24:34,080

they had to breaking it was heil hitler

670

00:24:39,350 --> 00:24:37,360

because that was repeated um uh almost

671

00:24:41,350 --> 00:24:39,360

um every message ended hh for heil

672

00:24:43,909 --> 00:24:41,360

hitler every morse message in hh

673

00:24:45,430 --> 00:24:43,919

and if somebody failed to send hhh the

674

00:24:48,630 --> 00:24:45,440

other end would say

675

00:24:51,830 --> 00:24:48,640

have have you forgotten something

676

00:24:53,430 --> 00:24:51,840

is it not good enough um now what they

677

00:24:54,950 --> 00:24:53,440

would do they'd send a setting which was

678

00:24:56,470 --> 00:24:54,960

three letters and that's where the three

679

00:24:58,390 --> 00:24:56,480

voters were on the enigma

680

00:25:01,029 --> 00:24:58,400

yeah and they'd send that twice so it

681

00:25:03,269 --> 00:25:01,039

would start you know like um

682

00:25:04,310 --> 00:25:03,279

lmn lmn that was where the three voters

683

00:25:05,669 --> 00:25:04,320

were positioned

684

00:25:07,510 --> 00:25:05,679

so when you get the message you know in

685

00:25:09,269 --> 00:25:07,520

the first six letters

686

00:25:10,630 --> 00:25:09,279

numbers four five and six are a copy of

687

00:25:12,950 --> 00:25:10,640

numbers one two and three

688

00:25:15,350 --> 00:25:12,960

wow the same letter under there so you

689

00:25:17,110 --> 00:25:15,360

you try all the settings until you get a

690

00:25:18,870 --> 00:25:17,120

result that gives you four five and six

691

00:25:20,710 --> 00:25:18,880

to savings one two and three

692

00:25:22,789 --> 00:25:20,720

and that gives you the voter positions

693

00:25:24,149 --> 00:25:22,799

then you just read it after that

694

00:25:27,190 --> 00:25:24,159

you know but this was done in the

695

00:25:29,590 --> 00:25:27,200

enormous haste with enormous some

696

00:25:30,630 --> 00:25:29,600

urgency uh the settings was it was

697

00:25:31,990 --> 00:25:30,640

issued

698

00:25:33,350 --> 00:25:32,000

then of course there was a problem that

699

00:25:35,350 --> 00:25:33,360

you couldn't let the germans know you

700

00:25:37,669 --> 00:25:35,360

were reading the code so they had to

701

00:25:39,029 --> 00:25:37,679

well that was in in the the imitation

702

00:25:40,870 --> 00:25:39,039

game the movie one of the problems they

703

00:25:42,390 --> 00:25:40,880

had we can't let on we've broken the

704

00:25:44,230 --> 00:25:42,400

code otherwise don't scrap

705

00:25:45,909 --> 00:25:44,240

the whole system that was a problem it

706

00:25:47,909 --> 00:25:45,919

was it was said that churchill knew

707

00:25:51,190 --> 00:25:47,919

about the bombing of coventry

708

00:25:51,990 --> 00:25:51,200

beforehand um there's two answers to

709

00:25:55,590 --> 00:25:52,000

that well

710

00:25:57,669 --> 00:25:55,600

the truth is he didn't he didn't know um

711

00:25:59,750 --> 00:25:57,679

but if he had known that the germans are

712

00:26:02,950 --> 00:25:59,760

going to go and bomb coventry he

713

00:26:05,590 --> 00:26:02,960

would not have let on because if you

714

00:26:07,269 --> 00:26:05,600

send airplanes to intercept the bombers

715

00:26:09,510 --> 00:26:07,279

the germans think how do they know

716

00:26:10,870 --> 00:26:09,520

that yeah and the whole goose that lays

717

00:26:12,870 --> 00:26:10,880

the golden egg will be killed

718

00:26:14,070 --> 00:26:12,880

and um she had to be sort of careful

719

00:26:16,789 --> 00:26:14,080

with the intelligence but

720

00:26:19,350 --> 00:26:16,799

um we got some things out of it in the

721

00:26:21,590 --> 00:26:19,360

second world war it was well worth doing

722

00:26:23,510 --> 00:26:21,600

um it said that the war changed because

723

00:26:25,350 --> 00:26:23,520

of that that's a bit of

724

00:26:26,870 --> 00:26:25,360

artistic license i think well that's

725

00:26:30,710 --> 00:26:26,880

fine i mean to make an

726

00:26:33,909 --> 00:26:30,720

enjoyable movie but folks i am looking

727

00:26:37,830 --> 00:26:33,919

and there it is at a world war ii uh

728

00:26:39,269 --> 00:26:37,840

coding machine converter m209 m209b

729

00:26:40,950 --> 00:26:39,279

that's what we have if you look that up

730

00:26:41,430 --> 00:26:40,960

on the internet you can uh see all about

731

00:26:44,789 --> 00:26:41,440

that

732

00:26:46,710 --> 00:26:44,799

if you look up m from other m209

733

00:26:48,870 --> 00:26:46,720

you'll see diagrams and pictures of the

734

00:26:49,510 --> 00:26:48,880

machine and pages on how it works and

735

00:26:51,269 --> 00:26:49,520

everything

736

00:26:52,710 --> 00:26:51,279

yeah and i've got i've got a real one

737

00:26:53,350 --> 00:26:52,720

here you've got a real one there and it

738

00:26:55,269 --> 00:26:53,360

and it's just

739

00:26:57,590 --> 00:26:55,279

it's it's still after all these years

740

00:26:58,230 --> 00:26:57,600

it's what pushing 70 years old whatever

741

00:27:00,310 --> 00:26:58,240

it is

742

00:27:01,590 --> 00:27:00,320

it looks like it was made yesterday it's

743

00:27:03,110 --> 00:27:01,600

still in perfect condition

744

00:27:04,630 --> 00:27:03,120

simon singh looked after it it's been

745

00:27:07,909 --> 00:27:04,640

oiled well and it

746

00:27:08,310 --> 00:27:07,919

works you know um perfectly so i'm very

747

00:27:10,870 --> 00:27:08,320

uh

748

00:27:12,549 --> 00:27:10,880

complete i just i bought this at auction

749

00:27:14,230 --> 00:27:12,559

from london i'm

750

00:27:16,149 --> 00:27:14,240

just pleased to own it because it's so

751

00:27:17,990 --> 00:27:16,159

beautiful it's fantastic folks

752

00:27:19,269 --> 00:27:18,000

what i'll do is i'll link in this week's

753

00:27:21,510 --> 00:27:19,279

show notes to

754

00:27:22,389 --> 00:27:21,520

where you can buy the code book by simon

755

00:27:24,789 --> 00:27:22,399

singh and if you're

756

00:27:25,669 --> 00:27:24,799

at all interested in ciphers and codes

757

00:27:28,870 --> 00:27:25,679

and how they

758

00:27:31,110 --> 00:27:28,880

developed i couldn't recommend this book

759

00:27:32,789 --> 00:27:31,120

highly enough oh now you're putting in a

760

00:27:34,630 --> 00:27:32,799

new code what is it let's have some more

761

00:27:37,669 --> 00:27:34,640

wine i think more wine

762

00:27:39,350 --> 00:27:37,679

that's a good idea ah crash yeah um

763

00:27:40,789 --> 00:27:39,360

it was easy to destroy you just hit all

764

00:27:42,470 --> 00:27:40,799

the pins to the left and you've

765

00:27:43,830 --> 00:27:42,480

destroyed the setting

766

00:27:45,669 --> 00:27:43,840

uh then you just leave it behind the

767

00:27:47,269 --> 00:27:45,679

germans can find it they

768

00:27:49,029 --> 00:27:47,279

haven't already but without the pin set

769

00:27:51,110 --> 00:27:49,039

properly

770

00:27:52,149 --> 00:27:51,120

yeah it's just beautiful mass produced

771

00:27:55,909 --> 00:27:52,159

they made 140

772

00:27:58,950 --> 00:27:55,919

000 of them um and every soldier had one

773

00:27:59,669 --> 00:27:58,960

and actually later machines it said that

774

00:28:06,710 --> 00:27:59,679

the

775

00:28:07,830 --> 00:28:06,720

were developed from this thing not from

776

00:28:09,909 --> 00:28:07,840

the enigma

777

00:28:11,750 --> 00:28:09,919

oh um you know the logic of cypher

778

00:28:12,149 --> 00:28:11,760

machines i've worked in this field and

779

00:28:13,990 --> 00:28:12,159

actually

780

00:28:16,389 --> 00:28:14,000

the design of this was influential the

781

00:28:19,350 --> 00:28:16,399

design of later machines

782

00:28:20,310 --> 00:28:19,360

but the enigma sort of moved on and died

783

00:28:23,110 --> 00:28:20,320

it was a

784

00:28:23,750 --> 00:28:23,120

too hard to use um two unbelievable and

785

00:28:27,510 --> 00:28:23,760

it's got the

786

00:28:30,070 --> 00:28:27,520

enigma

787

00:28:30,710 --> 00:28:30,080

the mythology mythology yeah oh well

788

00:28:32,710 --> 00:28:30,720

yeah

789

00:28:34,470 --> 00:28:32,720

oh well the wine has arrived so cheers

790

00:28:44,670 --> 00:28:34,480

steve and thanks very much

791

00:28:49,909 --> 00:28:44,680

yep cheers

792

00:28:53,190 --> 00:28:49,919

[Music]

793

00:28:54,870 --> 00:28:53,200

this is nasa uh i see a flat earth but

794

00:28:55,830 --> 00:28:54,880

we should lie to everybody about it and

795

00:28:58,710 --> 00:28:55,840

say it's round

796

00:28:59,430 --> 00:28:58,720

10-4 maximum fun brings you the latest

797

00:29:03,350 --> 00:28:59,440

podcast

798

00:29:05,269 --> 00:29:03,360

an expose on the flat earth i want to

799

00:29:06,789 --> 00:29:05,279

take advantage of humankind and make

800

00:29:07,990 --> 00:29:06,799

them believe a lie so that they will

801
00:29:09,430 --> 00:29:08,000
trust us with the government

802
00:29:11,830 --> 00:29:09,440
it's all an elaborate lie and when you

803
00:29:13,029 --> 00:29:11,840
get on a plane they purposefully fly you

804
00:29:15,669 --> 00:29:13,039
farther than you need to go

805
00:29:17,510 --> 00:29:15,679
it's disgusting it needs to be stopped

806
00:29:18,870 --> 00:29:17,520
and if you listen to ono ross and carrie

807
00:29:23,510 --> 00:29:18,880
we will tell you the truth

808
00:29:26,789 --> 00:29:25,110
we will just tell you the truth behind

809
00:29:28,549 --> 00:29:26,799
the truth because what we do is we look

810
00:29:30,710 --> 00:29:28,559
at extraordinary claims

811
00:29:32,789 --> 00:29:30,720
that's right we've gone undercover with

812
00:29:34,070 --> 00:29:32,799
alternative medical treatments fringe

813
00:29:36,310 --> 00:29:34,080

religious groups

814

00:29:37,350 --> 00:29:36,320

fringe science claims the spiritual

815

00:29:38,870 --> 00:29:37,360

paranormal

816

00:29:40,710 --> 00:29:38,880

we're there to check it out and let you

817

00:29:41,350 --> 00:29:40,720

know what happens is the queen mary

818

00:29:44,149 --> 00:29:41,360

haunted

819

00:29:44,710 --> 00:29:44,159

i don't know find out we show up we make

820

00:29:46,630 --> 00:29:44,720

friends

821

00:29:48,710 --> 00:29:46,640

we learn what happens when you ask

822

00:29:50,789 --> 00:29:48,720

questions and we tell you all about it

823

00:29:52,710 --> 00:29:50,799

and we get all that funky stuff done to

824

00:29:58,090 --> 00:29:52,720

us it's oh no ross and kerry

825

00:30:07,269 --> 00:30:05,190

[Music]

826

00:30:08,870 --> 00:30:07,279

hi my name is tim mendenham i'm the

827

00:30:10,149 --> 00:30:08,880

executive officer for australian

828

00:30:13,430 --> 00:30:10,159

skeptics and i'm also

829

00:30:13,909 --> 00:30:13,440

editor of the skeptic magazine and i'd

830

00:30:15,909 --> 00:30:13,919

like to

831

00:30:17,350 --> 00:30:15,919

cover an article that we ran in the

832

00:30:20,230 --> 00:30:17,360

skeptic magazine

833

00:30:21,029 --> 00:30:20,240

some time ago actually in march 2018

834

00:30:24,870 --> 00:30:21,039

which is

835

00:30:28,630 --> 00:30:24,880

volume 38 number one and this article

836

00:30:36,389 --> 00:30:28,640

is about the hole in the pole or

837

00:30:38,630 --> 00:30:36,399

the hole in the pole

838

00:30:39,830 --> 00:30:38,640

this will be part one of a number of uh

839

00:30:41,190 --> 00:30:39,840

presentations on this because it's a

840

00:30:42,789 --> 00:30:41,200

pretty lengthy article

841

00:30:45,269 --> 00:30:42,799

so i don't want to bog you down with all

842

00:30:47,190 --> 00:30:45,279

of it in one go but basically

843

00:30:49,350 --> 00:30:47,200

this was articles looking at secret

844

00:30:50,389 --> 00:30:49,360

entrance ways to the hollow earth

845

00:30:52,549 --> 00:30:50,399

and these have been proposed for

846

00:30:54,149 --> 00:30:52,559

centuries so i want to look down and

847

00:30:59,029 --> 00:30:54,159

perhaps go down one of those holes or

848

00:31:02,710 --> 00:31:01,190

virtually every religion refers to a

849

00:31:05,029 --> 00:31:02,720

subterranean world

850

00:31:06,389 --> 00:31:05,039

which is variously an afterlife like

851
00:31:09,190 --> 00:31:06,399
hell purgatory or the

852
00:31:11,750 --> 00:31:09,200
lisbon fields or a secret place where

853
00:31:13,990 --> 00:31:11,760
other civilizations do their business

854
00:31:16,230 --> 00:31:14,000
the greeks had hades the jewish sheol

855
00:31:18,710 --> 00:31:16,240
the tibetan buddhists have shambala the

856
00:31:20,149 --> 00:31:18,720
nordic people have fossil free farmers

857
00:31:21,029 --> 00:31:20,159
so i can't pronounce that word never

858
00:31:24,149 --> 00:31:21,039
mind

859
00:31:26,630 --> 00:31:24,159
the hindu patala

860
00:31:28,149 --> 00:31:26,640
and of course the christians have hell

861
00:31:30,310 --> 00:31:28,159
the concept has been

862
00:31:31,269 --> 00:31:30,320
elaborated upon in some of the world's

863
00:31:34,230 --> 00:31:31,279

great literature

864

00:31:34,950 --> 00:31:34,240

the legend of orpheus's trip to retrieve

865

00:31:38,230 --> 00:31:34,960

his

866

00:31:39,430 --> 00:31:38,240

lost love eurydice dante's inferno the

867

00:31:43,190 --> 00:31:39,440

hindu ramayana

868

00:31:44,710 --> 00:31:43,200

casanova had to go with his aiko samiron

869

00:31:46,230 --> 00:31:44,720

the story of a brother and sister who

870

00:31:48,149 --> 00:31:46,240

fall into the earth and discover the

871

00:31:50,950 --> 00:31:48,159

subterranean utopia

872

00:31:54,149 --> 00:31:50,960

of the mega micros a race of

873

00:31:56,070 --> 00:31:54,159

multicoloured hermaphroditic dwarves

874

00:31:57,750 --> 00:31:56,080

on the more popular level jules verne's

875

00:32:00,310 --> 00:31:57,760

journey to the center of the earth

876
00:32:01,750 --> 00:32:00,320
was about an underground cavernous world

877
00:32:03,909 --> 00:32:01,760
not a hollow earth

878
00:32:05,669 --> 00:32:03,919
and hp lovecraft's at the mountains of

879
00:32:07,350 --> 00:32:05,679
madness with the discovery of the

880
00:32:10,389 --> 00:32:07,360
underground remnants of an ancient

881
00:32:14,070 --> 00:32:10,399
alien civilization in antarctica

882
00:32:16,310 --> 00:32:14,080
full of horrors too horrible to recount

883
00:32:18,310 --> 00:32:16,320
tarzan author edgar rice burroughs wrote

884
00:32:21,269 --> 00:32:18,320
a seven novel series

885
00:32:23,590 --> 00:32:21,279
about pelusidor a prehistoric world

886
00:32:25,909 --> 00:32:23,600
hundreds of miles beneath the surface

887
00:32:26,950 --> 00:32:25,919
the first volume was entitled at the

888
00:32:29,750 --> 00:32:26,960

earth's core

889

00:32:31,590 --> 00:32:29,760

and tarzan himself makes a visit in one

890

00:32:34,630 --> 00:32:31,600

of the books

891

00:32:38,389 --> 00:32:34,640

there's a plethora of places below us

892

00:32:39,830 --> 00:32:38,399

the problem has been how to get there

893

00:32:41,430 --> 00:32:39,840

strictly speaking this shouldn't be a

894

00:32:42,950 --> 00:32:41,440

problem as there are numerous caverns

895

00:32:43,830 --> 00:32:42,960

and caves scattered across the surface

896

00:32:46,389 --> 00:32:43,840

of the globe

897

00:32:48,310 --> 00:32:46,399

that are said to lead to the underworld

898

00:32:49,269 --> 00:32:48,320

all across ancient greece thrace and

899

00:32:50,630 --> 00:32:49,279

mesopotamia

900

00:32:53,110 --> 00:32:50,640

there are caverns that will take you

901
00:32:55,350 --> 00:32:53,120
down where you're going to

902
00:32:57,750 --> 00:32:55,360
ireland has krakan i don't know how to

903
00:33:00,549 --> 00:32:57,760
pronounce that in irish but never mind

904
00:33:01,029 --> 00:33:00,559
which is the gate to hell in county ross

905
00:33:03,509 --> 00:33:01,039
common

906
00:33:05,350 --> 00:33:03,519
in the center of the island also station

907
00:33:06,230 --> 00:33:05,360
island in county donegal in the far

908
00:33:10,549 --> 00:33:06,240
north

909
00:33:13,269 --> 00:33:10,559
island was a site for pilgrimage

910
00:33:14,549 --> 00:33:13,279
for knights and saints and county down

911
00:33:16,230 --> 00:33:14,559
features

912
00:33:18,230 --> 00:33:16,240
tunnels that led to the land of the

913
00:33:20,310 --> 00:33:18,240

subterranean here's another term

914

00:33:21,590 --> 00:33:20,320

twather dead dumb honor someone could

915

00:33:22,870 --> 00:33:21,600

correct me on these but i mean

916

00:33:25,110 --> 00:33:22,880

that's okay you'll have to take me on

917

00:33:25,750 --> 00:33:25,120

faith and there were a group of people

918

00:33:27,990 --> 00:33:25,760

who

919

00:33:29,430 --> 00:33:28,000

are believed to have introduced druidism

920

00:33:31,990 --> 00:33:29,440

to ireland

921

00:33:32,549 --> 00:33:32,000

and they went back underground the list

922

00:33:37,269 --> 00:33:32,559

goes on

923

00:33:40,630 --> 00:33:37,279

germany italy siberia india japan china

924

00:33:42,389 --> 00:33:40,640

turkmenistan brazil peru central america

925

00:33:44,230 --> 00:33:42,399

the usa

926
00:33:45,830 --> 00:33:44,240
they all have something iceland features

927
00:33:47,430 --> 00:33:45,840
as the site where vern's intrepid

928
00:33:48,630 --> 00:33:47,440
explorers started their journey to the

929
00:33:50,149 --> 00:33:48,640
center of the earth

930
00:33:51,990 --> 00:33:50,159
in fact there's hardly a part of the

931
00:33:54,710 --> 00:33:52,000
earth where you're not near an entrance

932
00:33:56,710 --> 00:33:54,720
to the underworld even the trobriand

933
00:34:00,389 --> 00:33:56,720
islanders off the coast of new guinea

934
00:34:03,350 --> 00:34:00,399
have a cavern called ahukulia

935
00:34:04,070 --> 00:34:03,360
that leads to the underworld one website

936
00:34:07,430 --> 00:34:04,080
which is

937
00:34:08,310 --> 00:34:07,440
entrance to hell entrance to the number

938
00:34:11,349 --> 00:34:08,320

two hell

939

00:34:12,790 --> 00:34:11,359

dot co dot uk lists over a hundred just

940

00:34:15,030 --> 00:34:12,800

in the uk

941

00:34:16,230 --> 00:34:15,040

though somehow a lot of them look like

942

00:34:19,270 --> 00:34:16,240

someone's garage

943

00:34:21,030 --> 00:34:19,280

including one called hot day which is

944

00:34:23,190 --> 00:34:21,040

the notorious entrance from which

945

00:34:25,909 --> 00:34:23,200

emerged all the sick twisted and drug

946

00:34:27,109 --> 00:34:25,919

addicted pop stars of the 1970s

947

00:34:29,430 --> 00:34:27,119

so i'm not quite sure how seriously you

948

00:34:30,149 --> 00:34:29,440

want to take that one but there are two

949

00:34:32,310 --> 00:34:30,159

places that

950

00:34:33,990 --> 00:34:32,320

modern whole fanatics point to as the

951
00:34:36,470 --> 00:34:34,000
ultimate in gateways

952
00:34:38,069 --> 00:34:36,480
to the underground the north and south

953
00:34:41,030 --> 00:34:38,079
poles

954
00:34:42,310 --> 00:34:41,040
john simms in the early 1800s proposed

955
00:34:44,310 --> 00:34:42,320
polar entrances

956
00:34:45,909 --> 00:34:44,320
and lobbied the u.s congress to get an

957
00:34:49,349 --> 00:34:45,919
expedition to the north pole

958
00:34:51,270 --> 00:34:49,359
just to prove it congress rejected it

959
00:34:52,869 --> 00:34:51,280
where president john quincy adams

960
00:34:55,909 --> 00:34:52,879
apparently agreed

961
00:34:58,150 --> 00:34:55,919
calling the plan visionary adams only

962
00:35:00,710 --> 00:34:58,160
served one term as president

963
00:35:02,230 --> 00:35:00,720

some have suggested his support of

964

00:35:03,670 --> 00:35:02,240

visionary projects

965

00:35:05,829 --> 00:35:03,680

and claims might have proved an

966

00:35:08,310 --> 00:35:05,839

influence in that only serving one

967

00:35:10,870 --> 00:35:08,320

term and his successor andrew jackson

968

00:35:12,870 --> 00:35:10,880

squashed the idea

969

00:35:14,390 --> 00:35:12,880

but adams was not the only world leader

970

00:35:17,430 --> 00:35:14,400

to support the pole hull

971

00:35:20,630 --> 00:35:17,440

notion among the many other claims of

972

00:35:23,589 --> 00:35:20,640

fascination with the occult

973

00:35:25,030 --> 00:35:23,599

astrology nostradamus etc adolf hitler

974

00:35:26,390 --> 00:35:25,040

and his supporters were supposedly

975

00:35:28,630 --> 00:35:26,400

interested in the prospect of

976

00:35:30,870 --> 00:35:28,640

disappearing down a hull

977

00:35:32,630 --> 00:35:30,880

in fact so the story goes hitler and his

978

00:35:35,589 --> 00:35:32,640

followers wanted to create

979

00:35:37,430 --> 00:35:35,599

a race of super soldiers an aryan race

980

00:35:40,310 --> 00:35:37,440

like the atlanteans

981

00:35:41,829 --> 00:35:40,320

to rule the world they escaped the last

982

00:35:43,430 --> 00:35:41,839

days of the third reich

983

00:35:44,950 --> 00:35:43,440

by going through the opening at the

984

00:35:47,990 --> 00:35:44,960

south pole

985

00:35:48,390 --> 00:35:48,000

and they are still there with nazi

986

00:35:51,190 --> 00:35:48,400

design

987

00:35:52,950 --> 00:35:51,200

ufos nazi collaboration with the people

988

00:35:55,190 --> 00:35:52,960

who live in the center of the earth

989

00:35:56,310 --> 00:35:55,200

and the possible explanation for aryan

990

00:35:59,349 --> 00:35:56,320

looking ufo

991

00:36:01,510 --> 00:35:59,359

pilots race to the poll by nazi's

992

00:36:03,030 --> 00:36:01,520

mystery adventure and excitement

993

00:36:05,430 --> 00:36:03,040

it sounds like the plot of an indiana

994

00:36:07,910 --> 00:36:05,440

jones movie and it is

995

00:36:09,990 --> 00:36:07,920

well a story anyway the book indiana

996

00:36:13,430 --> 00:36:10,000

jones and the hollow earth by max mccooy

997

00:36:16,710 --> 00:36:13,440

came out in 1997 and it concerns quote

998

00:36:19,510 --> 00:36:16,720

a violent storm a dying arctic explorer

999

00:36:22,710 --> 00:36:19,520

and a curious wooden box that makes indy

1000

00:36:25,510 --> 00:36:22,720

the target of fanatical nazi agents

1001
00:36:26,390 --> 00:36:25,520
inside the box are a slice of icelandic

1002
00:36:28,950 --> 00:36:26,400
stone

1003
00:36:30,390 --> 00:36:28,960
with mythological powers and a journal

1004
00:36:32,069 --> 00:36:30,400
hinting at the existence of an

1005
00:36:35,109 --> 00:36:32,079
underground civilization

1006
00:36:37,109 --> 00:36:35,119
near the top of the world indy and

1007
00:36:38,310 --> 00:36:37,119
ulla triunes a beautiful danish

1008
00:36:41,430 --> 00:36:38,320
scientist

1009
00:36:43,190 --> 00:36:41,440
set out into the arctic wastes racing

1010
00:36:45,990 --> 00:36:43,200
against nazi explorers

1011
00:36:47,510 --> 00:36:46,000
to search for the lost city their quest

1012
00:36:49,190 --> 00:36:47,520
will lead them to a massive cavern

1013
00:36:52,069 --> 00:36:49,200

beneath the snow

1014

00:36:54,310 --> 00:36:52,079

portal to the legendary ultima thule the

1015

00:36:55,990 --> 00:36:54,320

key to hitler's mad plan for world

1016

00:36:59,030 --> 00:36:56,000

domination

1017

00:37:02,069 --> 00:36:59,040

so the stories of the hole in the poll

1018

00:37:03,030 --> 00:37:02,079

match that pretty much now any

1019

00:37:05,829 --> 00:37:03,040

discussion of

1020

00:37:06,470 --> 00:37:05,839

mad plots eccentric characters and polar

1021

00:37:08,310 --> 00:37:06,480

holes

1022

00:37:10,550 --> 00:37:08,320

must include reference to one of the

1023

00:37:12,790 --> 00:37:10,560

great adventurers and explorers of the

1024

00:37:14,630 --> 00:37:12,800

20th century

1025

00:37:16,390 --> 00:37:14,640

and here i'm referring to rear admiral

1026

00:37:20,829 --> 00:37:16,400

richard evelyn

1027

00:37:22,710 --> 00:37:20,839

bird jr he was born in 1888 and died in

1028

00:37:24,870 --> 00:37:22,720

1957.

1029

00:37:26,790 --> 00:37:24,880

bird was an american naval officer a

1030

00:37:29,190 --> 00:37:26,800

recipient of the medal of honor for an

1031

00:37:32,069 --> 00:37:29,200

achievement he might never have made

1032

00:37:33,910 --> 00:37:32,079

a pioneering aviator and polo explorer

1033

00:37:35,349 --> 00:37:33,920

he was also a leading mason

1034

00:37:37,430 --> 00:37:35,359

was supposedly involved with the

1035

00:37:38,390 --> 00:37:37,440

illuminati and their plans for a new

1036

00:37:40,230 --> 00:37:38,400

world order

1037

00:37:41,910 --> 00:37:40,240

and his early arctic and antarctic

1038

00:37:43,430 --> 00:37:41,920

explorations had been financed by the

1039

00:37:46,069 --> 00:37:43,440

illuminati paymaster

1040

00:37:47,589 --> 00:37:46,079

john d rockefeller now okay that last

1041

00:37:50,550 --> 00:37:47,599

bit is just silly

1042

00:37:52,630 --> 00:37:50,560

but he did have real achievements as a

1043

00:37:54,390 --> 00:37:52,640

naval aviator during world war one he

1044

00:37:55,270 --> 00:37:54,400

developed many techniques for navigating

1045

00:37:58,630 --> 00:37:55,280

airplanes

1046

00:38:01,910 --> 00:37:58,640

over the open oceans including

1047

00:38:04,710 --> 00:38:01,920

drift indicators the sun compass

1048

00:38:06,069 --> 00:38:04,720

and bubble sextance because of this

1049

00:38:07,190 --> 00:38:06,079

background he was involved in the

1050

00:38:10,470 --> 00:38:07,200

planning of the first

1051
00:38:13,349 --> 00:38:10,480
transatlantic flight in 1919 and made

1052
00:38:16,390 --> 00:38:13,359
his own transatlantic flight in 1927

1053
00:38:17,829 --> 00:38:16,400
just six weeks after charles lindbergh

1054
00:38:19,750 --> 00:38:17,839
he would have been earlier but he had

1055
00:38:21,430 --> 00:38:19,760
problems with his plane

1056
00:38:23,349 --> 00:38:21,440
now for the record lindbergh was

1057
00:38:24,870 --> 00:38:23,359
actually the 19th person to cross the

1058
00:38:27,030 --> 00:38:24,880
atlantic in an airplane

1059
00:38:28,069 --> 00:38:27,040
and the 82nd overall if you include

1060
00:38:30,470 --> 00:38:28,079
dirigibles

1061
00:38:31,430 --> 00:38:30,480
or blimps but he was the first to do the

1062
00:38:35,190 --> 00:38:31,440
non-stop flight

1063
00:38:37,750 --> 00:38:35,200

solo bird and his co-pilot floyd bennett

1064

00:38:39,430 --> 00:38:37,760

were awarded the medal of honor in 1926

1065

00:38:41,109 --> 00:38:39,440

for being the first people to fly over

1066

00:38:43,109 --> 00:38:41,119

the north pole

1067

00:38:44,829 --> 00:38:43,119

ticker tape parade and presidential

1068

00:38:45,990 --> 00:38:44,839

greeting from calvin cool is

1069

00:38:48,069 --> 00:38:46,000

notwithstanding

1070

00:38:49,990 --> 00:38:48,079

his achievement has been cast into doubt

1071

00:38:52,470 --> 00:38:50,000

with suggestions he fell short by as

1072

00:38:54,390 --> 00:38:52,480

much as 130 kilometers

1073

00:38:56,390 --> 00:38:54,400

returning to base too quickly for the

1074

00:38:58,310 --> 00:38:56,400

flight to have been successful

1075

00:39:00,230 --> 00:38:58,320

there are also suggestions of a doctored

1076

00:39:01,750 --> 00:39:00,240

flight log

1077

00:39:04,230 --> 00:39:01,760

but a greater interest to this

1078

00:39:06,069 --> 00:39:04,240

particular story a bird's supposed

1079

00:39:08,069 --> 00:39:06,079

claims about the hollow earth

1080

00:39:10,310 --> 00:39:08,079

a hole in the south pole and flying

1081

00:39:12,310 --> 00:39:10,320

saucers in 1946

1082

00:39:15,589 --> 00:39:12,320

bird was appointed officer in charge of

1083

00:39:17,750 --> 00:39:15,599

an antarctic developments project

1084

00:39:20,069 --> 00:39:17,760

his fourth antarctic expedition was code

1085

00:39:21,670 --> 00:39:20,079

named operation high jump

1086

00:39:23,750 --> 00:39:21,680

which was the largest antarctic

1087

00:39:26,550 --> 00:39:23,760

exposition to date and was expected to

1088

00:39:29,990 --> 00:39:26,560

last six to eight months

1089

00:39:32,069 --> 00:39:30,000

according to a supposed secret journal

1090

00:39:34,069 --> 00:39:32,079

and i don't know how everyone knows

1091

00:39:36,550 --> 00:39:34,079

about secret journals but

1092

00:39:37,990 --> 00:39:36,560

it can't be that secret this secret

1093

00:39:40,150 --> 00:39:38,000

journal of his experiences in the

1094

00:39:44,190 --> 00:39:40,160

antarctic titled the inner earth

1095

00:39:47,510 --> 00:39:44,200

my secret diary on february 19

1096

00:39:50,550 --> 00:39:47,520

1947 according to the diary

1097

00:39:51,589 --> 00:39:50,560

bird flew into a sims hull near the

1098

00:39:53,270 --> 00:39:51,599

south pole

1099

00:39:56,310 --> 00:39:53,280

and made contact with the race that

1100

00:39:57,910 --> 00:39:56,320

lives inside the earth

1101
00:39:59,910 --> 00:39:57,920
naturally this report has been covered

1102
00:40:01,829 --> 00:39:59,920
up but like all secrets

1103
00:40:03,670 --> 00:40:01,839
covered up reports it is easily

1104
00:40:05,990 --> 00:40:03,680
available on the net

1105
00:40:07,589 --> 00:40:06,000
you can even buy it on amazon so it's

1106
00:40:09,750 --> 00:40:07,599
not that secret now there's a lot of

1107
00:40:10,630 --> 00:40:09,760
entries in this diary about his trip

1108
00:40:13,109 --> 00:40:10,640
down to the

1109
00:40:14,069 --> 00:40:13,119
the pole and i won't over burden you

1110
00:40:16,069 --> 00:40:14,079
with all of them

1111
00:40:17,750 --> 00:40:16,079
but just note that he flew over it

1112
00:40:20,390 --> 00:40:17,760
planes came across

1113
00:40:21,670 --> 00:40:20,400

pilots waved at him and then he saw

1114

00:40:23,030 --> 00:40:21,680

green land

1115

00:40:24,950 --> 00:40:23,040

below now there shouldn't be any green

1116

00:40:27,510 --> 00:40:24,960

land in antarctica

1117

00:40:29,190 --> 00:40:27,520

but he kept going and his navigation

1118

00:40:31,109 --> 00:40:29,200

instruments were spinning like crazy and

1119

00:40:32,710 --> 00:40:31,119

the gyroscope was oscillating back and

1120

00:40:35,190 --> 00:40:32,720

forth he said

1121

00:40:36,309 --> 00:40:35,200

he altered his altitude and executed a

1122

00:40:39,109 --> 00:40:36,319

sharp left turn

1123

00:40:40,950 --> 00:40:39,119

to better examine the valley is green

1124

00:40:43,190 --> 00:40:40,960

with either moss or a type of

1125

00:40:43,990 --> 00:40:43,200

tight-knit grass the light here seems

1126

00:40:46,150 --> 00:40:44,000

different

1127

00:40:47,349 --> 00:40:46,160

i cannot see the sun anymore we make

1128

00:40:49,190 --> 00:40:47,359

another left turn

1129

00:40:51,270 --> 00:40:49,200

and we spot what seems to be a large

1130

00:40:53,750 --> 00:40:51,280

animal of some kind below

1131

00:40:55,030 --> 00:40:53,760

it appears to be an elephant no it looks

1132

00:40:57,910 --> 00:40:55,040

more like a mammoth

1133

00:40:59,829 --> 00:40:57,920

this is incredible yet there it is

1134

00:41:00,630 --> 00:40:59,839

decrease altitude to 1 000 feet and take

1135

00:41:02,309 --> 00:41:00,640

binoculars

1136

00:41:03,750 --> 00:41:02,319

to better examine the animal it is

1137

00:41:04,950 --> 00:41:03,760

confirmed it is definitely a

1138

00:41:07,910 --> 00:41:04,960

mammoth-like animal

1139

00:41:09,190 --> 00:41:07,920

report this to base camp he goes on and

1140

00:41:10,230 --> 00:41:09,200

on with more green hills and that sort

1141

00:41:12,470 --> 00:41:10,240

of stuff

1142

00:41:13,910 --> 00:41:12,480

and the countryside below ends up being

1143

00:41:16,390 --> 00:41:13,920

more level and normal

1144

00:41:17,990 --> 00:41:16,400

if i may use that word ahead we spot

1145

00:41:19,910 --> 00:41:18,000

what seems to be a city

1146

00:41:21,430 --> 00:41:19,920

exclamation mark exclamation mark

1147

00:41:24,710 --> 00:41:21,440

exclamation mark

1148

00:41:26,309 --> 00:41:24,720

this is impossible aircraft seems light

1149

00:41:28,870 --> 00:41:26,319

and oddly buoyant

1150

00:41:30,950 --> 00:41:28,880

the controls refuse to respond my god

1151
00:41:32,870 --> 00:41:30,960
exclamation mark exclamation marks

1152
00:41:34,710 --> 00:41:32,880
off our port and starboard wings are a

1153
00:41:37,030 --> 00:41:34,720
strange type of aircraft

1154
00:41:38,230 --> 00:41:37,040
they are closing rapidly alongside they

1155
00:41:40,309 --> 00:41:38,240
are disc shaped

1156
00:41:42,069 --> 00:41:40,319
and have a radiant quality to them and

1157
00:41:45,190 --> 00:41:42,079
don't forget this is the

1158
00:41:47,510 --> 00:41:45,200
diary from 1947 although the book wasn't

1159
00:41:48,870 --> 00:41:47,520
published then

1160
00:41:51,270 --> 00:41:48,880
they are close enough now to see the

1161
00:41:52,550 --> 00:41:51,280
markings on them it is a type of

1162
00:41:54,630 --> 00:41:52,560
swastika

1163
00:41:56,309 --> 00:41:54,640

this is fantastic where are we what has

1164

00:41:57,910 --> 00:41:56,319

happened

1165

00:41:59,990 --> 00:41:57,920

i tug at the controls again they will

1166

00:42:03,750 --> 00:42:00,000

not respond we are caught in an

1167

00:42:06,470 --> 00:42:03,760

invisible vice grip of some type

1168

00:42:08,550 --> 00:42:06,480

later he reports that the this shaped

1169

00:42:09,109 --> 00:42:08,560

craft escorted him to a safe landing

1170

00:42:10,710 --> 00:42:09,119

area

1171

00:42:12,470 --> 00:42:10,720

where he was graciously greeted by

1172

00:42:15,270 --> 00:42:12,480

emissaries from the domain

1173

00:42:16,230 --> 00:42:15,280

of the ariani the inner world of the

1174

00:42:18,790 --> 00:42:16,240

earth

1175

00:42:19,910 --> 00:42:18,800

after having a rest he and his crew were

1176

00:42:23,109 --> 00:42:19,920

taken to meet the king

1177

00:42:24,790 --> 00:42:23,119

and queen of agatha they told him that

1178

00:42:26,630 --> 00:42:24,800

he'd be allowed to enter agatha

1179

00:42:28,150 --> 00:42:26,640

because of his high moral and ethical

1180

00:42:29,589 --> 00:42:28,160

character which is what he described

1181

00:42:30,870 --> 00:42:29,599

himself in the diary

1182

00:42:33,510 --> 00:42:30,880

they went on to say that they were

1183

00:42:35,990 --> 00:42:33,520

worried about the safety of the planet

1184

00:42:37,670 --> 00:42:36,000

due to the atomic bombs and other

1185

00:42:41,430 --> 00:42:37,680

testing done above the surface

1186

00:42:43,109 --> 00:42:41,440

by governments after the visit

1187

00:42:45,750 --> 00:42:43,119

bird and his crew were guided back to

1188

00:42:47,589 --> 00:42:45,760

the surface of the planet

1189

00:42:49,670 --> 00:42:47,599

as justification for revealing these

1190

00:42:52,230 --> 00:42:49,680

events in his secret diary

1191

00:42:53,510 --> 00:42:52,240

bird says that there comes a time when

1192

00:42:55,910 --> 00:42:53,520

the rationality of men

1193

00:42:57,510 --> 00:42:55,920

must fade into insignificance and one

1194

00:43:00,870 --> 00:42:57,520

must accept the inevitability

1195

00:43:02,470 --> 00:43:00,880

of the truth capital t exclamation mark

1196

00:43:04,870 --> 00:43:02,480

i am not at liberty to disclose the

1197

00:43:07,030 --> 00:43:04,880

following documentation at this writing

1198

00:43:08,710 --> 00:43:07,040

any secret journal perhaps it shall

1199

00:43:10,069 --> 00:43:08,720

never see the light of public scrutiny

1200

00:43:12,309 --> 00:43:10,079

you can buy it on amazon

1201
00:43:14,069 --> 00:43:12,319
but i must do my duty and record here

1202
00:43:16,470 --> 00:43:14,079
for all to read one day

1203
00:43:18,150 --> 00:43:16,480
in a world of greed and exploitation of

1204
00:43:20,550 --> 00:43:18,160
certain of mankind

1205
00:43:22,790 --> 00:43:20,560
i can no longer suppress that which is

1206
00:43:25,270 --> 00:43:22,800
truth

1207
00:43:25,990 --> 00:43:25,280
surprisingly there are some people who

1208
00:43:28,790 --> 00:43:26,000
are skeptical

1209
00:43:31,190 --> 00:43:28,800
that the secret diary is genuine they

1210
00:43:34,550 --> 00:43:31,200
suggest that it is the work

1211
00:43:37,670 --> 00:43:34,560
of someone named f amadeo giannini

1212
00:43:39,829 --> 00:43:37,680
whose family founded the bank of italy

1213
00:43:41,190 --> 00:43:39,839

which actually started in san francisco

1214

00:43:42,790 --> 00:43:41,200

which later morphed into the bank of

1215

00:43:44,790 --> 00:43:42,800

america

1216

00:43:46,390 --> 00:43:44,800

alternatively it could be the work of a

1217

00:43:49,349 --> 00:43:46,400

missouri-based organization

1218

00:43:51,109 --> 00:43:49,359

called the society for a complete earth

1219

00:43:53,589 --> 00:43:51,119

which first released the diary in the

1220

00:43:55,829 --> 00:43:53,599

1970s

1221

00:43:57,190 --> 00:43:55,839

in a definitive proof that the 1940

1222

00:44:00,710 --> 00:43:57,200

diary is a fake

1223

00:44:05,510 --> 00:44:00,720

the author of a spanish website la teora

1224

00:44:08,150 --> 00:44:05,520

de la tierra which you can look up

1225

00:44:10,069 --> 00:44:08,160

which is the hollow earth theory it does

1226
00:44:11,910 --> 00:44:10,079
have some english language articles

1227
00:44:13,589 --> 00:44:11,920
points out that the dialogue between

1228
00:44:16,069 --> 00:44:13,599
bird and his agathon

1229
00:44:17,109 --> 00:44:16,079
hosts bears a striking resemblance to

1230
00:44:19,430 --> 00:44:17,119
that

1231
00:44:21,270 --> 00:44:19,440
in a meeting between a tibetan mystic

1232
00:44:25,030 --> 00:44:21,280
and a visitor from outside

1233
00:44:28,069 --> 00:44:25,040
in the 1937 film lost horizon

1234
00:44:31,990 --> 00:44:28,079
unfortunately the author firmly believes

1235
00:44:34,870 --> 00:44:32,000
that photos of the late 60s

1236
00:44:36,069 --> 00:44:34,880
clearly prove the hollow earth he

1237
00:44:39,349 --> 00:44:36,079
believes that this is the case

1238
00:44:41,589 --> 00:44:39,359

even though he doubts bird's diary

1239

00:44:43,910 --> 00:44:41,599

and he muddies what are actually muddied

1240

00:44:46,790 --> 00:44:43,920

waters by confusing the north pole

1241

00:44:47,750 --> 00:44:46,800

with the south pole there's not a lot of

1242

00:44:53,030 --> 00:44:47,760

accuracy

1243

00:44:56,470 --> 00:44:55,990

that's the end of part one of this story

1244

00:44:59,030 --> 00:44:56,480

and

1245

00:44:59,750 --> 00:44:59,040

in part two we'll be looking at those

1246

00:45:02,950 --> 00:44:59,760

photos

1247

00:45:04,790 --> 00:45:02,960

of the whole in the polls and then

1248

00:45:05,109 --> 00:45:04,800

follow up later with some of the people

1249

00:45:08,309 --> 00:45:05,119

who

1250

00:45:19,300 --> 00:45:08,319

spend time searching for the hull it's

1251
00:45:24,790 --> 00:45:19,310
an interesting story

1252
00:45:28,390 --> 00:45:27,109
hey fellow skeptics ben radford here

1253
00:45:29,910 --> 00:45:28,400
with celestia ward

1254
00:45:32,309 --> 00:45:29,920
your friendly host of squaring the

1255
00:45:35,030 --> 00:45:32,319
strange a podcast that looks at topics

1256
00:45:37,349 --> 00:45:35,040
ranging from legends panics and cryptids

1257
00:45:39,109 --> 00:45:37,359
to media myths psychology and folklore

1258
00:45:39,670 --> 00:45:39,119
breaking things down and picking things

1259
00:45:41,750 --> 00:45:39,680
apart

1260
00:45:43,670 --> 00:45:41,760
as we skeptics do we bring a few

1261
00:45:45,430 --> 00:45:43,680
different perspectives on things

1262
00:45:46,790 --> 00:45:45,440
celestia for example is a witty

1263
00:45:48,309 --> 00:45:46,800

cartoonist and ben

1264

00:45:50,309 --> 00:45:48,319

is a brilliant writer and long time

1265

00:45:50,870 --> 00:45:50,319

skeptical investigator we don't always

1266

00:45:53,030 --> 00:45:50,880

agree

1267

00:45:55,589 --> 00:45:53,040

but we have fun trying and we learn new

1268

00:45:56,150 --> 00:45:55,599

things join us for new topics every week

1269

00:45:58,309 --> 00:45:56,160

or two

1270

00:45:59,990 --> 00:45:58,319

or browse our backlog of evergreen

1271

00:46:02,470 --> 00:46:00,000

episodes available on

1272

00:46:03,190 --> 00:46:02,480

itunes and all your podcast feeding

1273

00:46:12,829 --> 00:46:03,200

troughs

1274

00:46:12,839 --> 00:46:17,220

bye-bye

1275

00:46:17,230 --> 00:46:28,870

[Music]

1276
00:46:32,630 --> 00:46:31,430
melbourne beautiful one day a bit rainy

1277
00:46:34,470 --> 00:46:32,640
the next

1278
00:46:36,150 --> 00:46:34,480
i've been here for a few days staying

1279
00:46:37,270 --> 00:46:36,160
with my good friend dr steve roberts and

1280
00:46:39,990 --> 00:46:37,280
first

1281
00:46:41,670 --> 00:46:40,000
day i was here we were looking for air

1282
00:46:41,990 --> 00:46:41,680
conditioning and cool drinks now we're

1283
00:46:44,790 --> 00:46:42,000
looking

1284
00:46:46,550 --> 00:46:44,800
for warmth i'm near flinders street the

1285
00:46:48,390 --> 00:46:46,560
famous flinders street

1286
00:46:50,069 --> 00:46:48,400
the trams are rolling by and i'm with

1287
00:46:52,230 --> 00:46:50,079
michelle vickersma who is the

1288
00:46:53,510 --> 00:46:52,240

secretary for the vic skeptics that's

1289

00:46:55,030 --> 00:46:53,520

right richard hello

1290

00:46:56,790 --> 00:46:55,040

it's nice to be here and chat to you

1291

00:46:58,150 --> 00:46:56,800

about this hey i'm really looking

1292

00:46:59,510 --> 00:46:58,160

forward to it because of course we're

1293

00:47:01,030 --> 00:46:59,520

going to be talking about the upcoming

1294

00:47:03,829 --> 00:47:01,040

skepticon

1295

00:47:05,190 --> 00:47:03,839

and just over a month away now the

1296

00:47:09,670 --> 00:47:05,200

countdown's on

1297

00:47:13,190 --> 00:47:09,680

excited i'm really excited and i

1298

00:47:15,109 --> 00:47:13,200

am counting down for sure i can't wait

1299

00:47:17,270 --> 00:47:15,119

i loved the last one that was here in

1300

00:47:19,190 --> 00:47:17,280

melbourne and i'm just

1301
00:47:21,190 --> 00:47:19,200
thrilled that we're having another one

1302
00:47:23,109 --> 00:47:21,200
yeah um yeah i can't wait

1303
00:47:25,349 --> 00:47:23,119
i mean uh i guess i've been lucky enough

1304
00:47:27,990 --> 00:47:25,359
to be here in melbourne for

1305
00:47:29,270 --> 00:47:28,000
four three or four conventions sadly i

1306
00:47:30,309 --> 00:47:29,280
missed the last melbourne when i

1307
00:47:31,829 --> 00:47:30,319
couldn't make it

1308
00:47:35,190 --> 00:47:31,839
but i remember coming here in the early

1309
00:47:37,270 --> 00:47:35,200
2000s and then the mid-2000s and

1310
00:47:39,190 --> 00:47:37,280
so on to various conventions always a

1311
00:47:41,510 --> 00:47:39,200
great time now we have a list

1312
00:47:43,349 --> 00:47:41,520
in front of us of some of the speakers

1313
00:47:44,790 --> 00:47:43,359

oh hello

1314

00:47:47,030 --> 00:47:44,800

it's all happening downtown melbourne

1315

00:47:48,710 --> 00:47:47,040

what's that low-flying helicopter they

1316

00:47:51,750 --> 00:47:48,720

found us at last

1317

00:47:55,349 --> 00:47:51,760

they're just a tourist yeah helicopter

1318

00:47:58,950 --> 00:47:55,359

helicopter wow

1319

00:48:02,470 --> 00:47:58,960

there it goes there it goes yeah it's uh

1320

00:48:04,630 --> 00:48:02,480

red yeah red and yellow i think

1321

00:48:05,510 --> 00:48:04,640

so you can take helicopter rides through

1322

00:48:07,829 --> 00:48:05,520

over melbourne

1323

00:48:08,549 --> 00:48:07,839

yeah just further along the river down

1324

00:48:11,030 --> 00:48:08,559

opposite

1325

00:48:12,790 --> 00:48:11,040

south wharf that i walked past the

1326
00:48:15,349 --> 00:48:12,800
helicopter pad

1327
00:48:16,790 --> 00:48:15,359
and the blades were going and it was

1328
00:48:18,950 --> 00:48:16,800
very loud

1329
00:48:20,069 --> 00:48:18,960
so that's why that's how i knew there

1330
00:48:21,829 --> 00:48:20,079
you are folks if you're coming to

1331
00:48:23,829 --> 00:48:21,839
melbourne you might want to take a

1332
00:48:25,750 --> 00:48:23,839
helicopter ride over the city but we're

1333
00:48:27,829 --> 00:48:25,760
just having a quick uh look at the

1334
00:48:29,430 --> 00:48:27,839
lineup of guests and what an impressive

1335
00:48:31,750 --> 00:48:29,440
lineup it is of course

1336
00:48:33,510 --> 00:48:31,760
the international guests are headed up

1337
00:48:34,390 --> 00:48:33,520
by the skeptic's guide to the universe

1338
00:48:35,910 --> 00:48:34,400

crew

1339

00:48:37,430 --> 00:48:35,920

and i know a lot of the skeptic's own

1340

00:48:38,230 --> 00:48:37,440

listeners listen to the skeptic's guide

1341

00:48:39,910 --> 00:48:38,240

to the universe and

1342

00:48:41,990 --> 00:48:39,920

now it's their opportunity to meet them

1343

00:48:42,790 --> 00:48:42,000

in person yes that's really exciting

1344

00:48:45,430 --> 00:48:42,800

that was my

1345

00:48:47,190 --> 00:48:45,440

first foray into skepticism really just

1346

00:48:48,710 --> 00:48:47,200

searching for things that i thought

1347

00:48:52,309 --> 00:48:48,720

sounded a little bit dodgy

1348

00:48:55,589 --> 00:48:52,319

on the internet and coming across um

1349

00:48:57,430 --> 00:48:55,599

steve novella's blog yeah reading a lot

1350

00:49:00,230 --> 00:48:57,440

of stuff on there that was

1351
00:49:01,750 --> 00:49:00,240
my entry really so i'm very excited to

1352
00:49:02,309 --> 00:49:01,760
see them after listening to them for

1353
00:49:03,670 --> 00:49:02,319
years

1354
00:49:06,150 --> 00:49:03,680
that's fantastic yeah i know a lot of

1355
00:49:07,510 --> 00:49:06,160
people are i'm i'm delighted to see them

1356
00:49:10,230 --> 00:49:07,520
because uh

1357
00:49:10,950 --> 00:49:10,240
i i've known the rogues now for some

1358
00:49:13,270 --> 00:49:10,960
years and

1359
00:49:15,270 --> 00:49:13,280
it's always a thrill to see them and

1360
00:49:17,589 --> 00:49:15,280
also of course we've got susan gerbic

1361
00:49:20,549 --> 00:49:17,599
from gorilla skepticism on wikipedia

1362
00:49:23,109 --> 00:49:20,559
and mark edward the mentalist yes that's

1363
00:49:25,109 --> 00:49:23,119

exciting as well and i met susan last

1364

00:49:27,109 --> 00:49:25,119

time when she was here and was lucky to

1365

00:49:31,109 --> 00:49:27,119

spend a day with her

1366

00:49:34,069 --> 00:49:31,119

and yeah but i've yet to

1367

00:49:35,510 --> 00:49:34,079

meet mark and see his seance which i'm

1368

00:49:36,790 --> 00:49:35,520

very much looking forward to

1369

00:49:39,109 --> 00:49:36,800

it'll be a highlight hello we've been

1370

00:49:40,420 --> 00:49:39,119

invaded by birds now it's all

1371

00:49:42,230 --> 00:49:40,430

they are under the table

1372

00:49:44,390 --> 00:49:42,240

[Music]

1373

00:49:46,390 --> 00:49:44,400

it's an exciting place melbourne it

1374

00:49:48,950 --> 00:49:46,400

seems lots of things are descending

1375

00:49:49,990 --> 00:49:48,960

from the sky to to visit us at the

1376

00:49:51,270 --> 00:49:50,000

moment

1377

00:49:53,030 --> 00:49:51,280

now let's have a look at some of the

1378

00:49:55,190 --> 00:49:53,040

interstate the australian speakers uh

1379

00:49:57,349 --> 00:49:55,200

we've got dr brad mackay of course from

1380

00:49:59,190 --> 00:49:57,359

tv the tv doctor he's also part of the

1381

00:50:00,870 --> 00:49:59,200

new south wales skeptics committee

1382

00:50:02,230 --> 00:50:00,880

really looking forward to anything dr

1383

00:50:05,589 --> 00:50:02,240

brad has to say he's a

1384

00:50:09,190 --> 00:50:05,599

fantastic guy and who else we've got

1385

00:50:12,790 --> 00:50:09,200

we've got sue urachi and

1386

00:50:13,670 --> 00:50:12,800

matt nurse belch coming down from

1387

00:50:17,109 --> 00:50:13,680

queensland

1388

00:50:17,750 --> 00:50:17,119

and jo thornley who i'm really looking

1389

00:50:21,190 --> 00:50:17,760

forward to

1390

00:50:23,030 --> 00:50:21,200

because of her podcast of cults

1391

00:50:25,589 --> 00:50:23,040

that i've been listening to and i read

1392

00:50:28,630 --> 00:50:25,599

her book and who doesn't love a cult

1393

00:50:30,309 --> 00:50:28,640

yeah and in fact i i i know joe from

1394

00:50:32,470 --> 00:50:30,319

many years back and i interviewed her

1395

00:50:33,670 --> 00:50:32,480

oh not so long ago and after i

1396

00:50:35,109 --> 00:50:33,680

interviewed her i started listening to

1397

00:50:37,589 --> 00:50:35,119

all her podcasts

1398

00:50:38,630 --> 00:50:37,599

the uh the cults what's it called it's

1399

00:50:41,750 --> 00:50:38,640

called um

1400

00:50:42,470 --> 00:50:41,760

sell it zealot yes yeah the podcast is

1401

00:50:44,390 --> 00:50:42,480

called zealot

1402

00:50:45,990 --> 00:50:44,400

and it's very relaxed and it's almost

1403

00:50:47,190 --> 00:50:46,000

like they've had a few too many glasses

1404

00:50:50,069 --> 00:50:47,200

of champagne but

1405

00:50:52,150 --> 00:50:50,079

it's a really interesting uh podcast and

1406

00:50:55,589 --> 00:50:52,160

we've got some local speakers of course

1407

00:50:58,630 --> 00:50:55,599

yes we've got fiona fiddler and

1408

00:51:02,069 --> 00:50:58,640

brendan o'brien who

1409

00:51:05,430 --> 00:51:02,079

has a podcast as well astrophys

1410

00:51:07,990 --> 00:51:05,440

tina hannigan and nicholas j

1411

00:51:08,790 --> 00:51:08,000

johnson of who of course is a magician

1412

00:51:12,630 --> 00:51:08,800

and

1413

00:51:13,190 --> 00:51:12,640

um the honest con man i believe is his

1414

00:51:15,670 --> 00:51:13,200

moniker

1415

00:51:17,510 --> 00:51:15,680

right so he's very entertaining and was

1416

00:51:19,990 --> 00:51:17,520

a must-have at the convention

1417

00:51:21,030 --> 00:51:20,000

after emceeding at the dinner at our last

1418

00:51:24,150 --> 00:51:21,040

one

1419

00:51:25,589 --> 00:51:24,160

um yeah he's actually going to present

1420

00:51:27,510 --> 00:51:25,599

at the convention this time

1421

00:51:29,030 --> 00:51:27,520

right i mean skeptics and magicians have

1422

00:51:30,790 --> 00:51:29,040

a long and happy relationship

1423

00:51:32,309 --> 00:51:30,800

really well look at james randy of

1424

00:51:34,150 --> 00:51:32,319

course the ultimate uh

1425

00:51:37,190 --> 00:51:34,160

combination of a skeptical magician i

1426
00:51:40,470 --> 00:51:37,200
suppose that's right and we'll have um

1427
00:51:43,829 --> 00:51:40,480
beyond sharma another magician and

1428
00:51:46,390 --> 00:51:43,839
uh dinner i think he is um

1429
00:51:47,589 --> 00:51:46,400
the emcee for the dinner on saturday

1430
00:51:50,710 --> 00:51:47,599
night fantastic

1431
00:51:52,390 --> 00:51:50,720
and lee murray now lee spoke at

1432
00:51:54,870 --> 00:51:52,400
skepticon last year in sydney

1433
00:51:56,549 --> 00:51:54,880
linguistics fascinating absolutely

1434
00:51:58,390 --> 00:51:56,559
brilliant just just

1435
00:52:00,069 --> 00:51:58,400
one of my favorite talks i think of the

1436
00:52:02,069 --> 00:52:00,079
the whole thing it's it's

1437
00:52:03,670 --> 00:52:02,079
really amazing the things that we get to

1438
00:52:04,630 --> 00:52:03,680

hear about in the skeptical movement

1439

00:52:06,710 --> 00:52:04,640

isn't it it's not just

1440

00:52:08,150 --> 00:52:06,720

ghosts and ufos anymore it's more than

1441

00:52:10,309 --> 00:52:08,160

that very much

1442

00:52:11,910 --> 00:52:10,319

well i think lee was discovered at

1443

00:52:15,990 --> 00:52:11,920

skepticamp

1444

00:52:18,470 --> 00:52:16,000

aries inlet possibly

1445

00:52:20,790 --> 00:52:18,480

through zola and james who ran that

1446

00:52:23,589 --> 00:52:20,800

because they are

1447

00:52:25,270 --> 00:52:23,599

speech therapists or speech pathologists

1448

00:52:28,630 --> 00:52:25,280

and they work in schools

1449

00:52:30,150 --> 00:52:28,640

so there may be some connection to lee

1450

00:52:33,510 --> 00:52:30,160

i'm not entirely sure

1451
00:52:35,030 --> 00:52:33,520
but we did uh first see lee at skepta

1452
00:52:37,190 --> 00:52:35,040
camp i believe yeah

1453
00:52:39,030 --> 00:52:37,200
where she was to stop it that's great

1454
00:52:41,430 --> 00:52:39,040
and uh who else we got there

1455
00:52:42,230 --> 00:52:41,440
hannah middleton okay well hannah

1456
00:52:44,549 --> 00:52:42,240
middleton

1457
00:52:46,150 --> 00:52:44,559
is going to present a talk called

1458
00:52:48,710 --> 00:52:46,160
listening to the universe

1459
00:52:49,670 --> 00:52:48,720
with gravitational waves of course yes

1460
00:52:53,190 --> 00:52:49,680
yes yes yes

1461
00:52:56,069 --> 00:52:53,200
and again one of the committee members

1462
00:52:58,390 --> 00:52:56,079
lana babikina knows hannah and

1463
00:53:00,069 --> 00:52:58,400

recommended that she speak at our monday

1464

00:53:03,270 --> 00:53:00,079

night skeptic cafe

1465

00:53:05,270 --> 00:53:03,280

and we were blown away by hannah and

1466

00:53:06,390 --> 00:53:05,280

the committee who were mostly there

1467

00:53:08,710 --> 00:53:06,400

unanimously

1468

00:53:09,910 --> 00:53:08,720

agreed that we had to secure her for

1469

00:53:13,990 --> 00:53:09,920

skepticon

1470

00:53:17,349 --> 00:53:14,000

she had a brilliant gorgeous slideshow

1471

00:53:18,069 --> 00:53:17,359

of um presenting her she explained it in

1472

00:53:21,750 --> 00:53:18,079

layman's

1473

00:53:25,109 --> 00:53:21,760

terms so that we could all understand it

1474

00:53:26,309 --> 00:53:25,119

and she's also the editor of ligo

1475

00:53:29,270 --> 00:53:26,319

magazine

1476

00:53:30,630 --> 00:53:29,280

that you can download online so very

1477

00:53:32,790 --> 00:53:30,640

fascinating

1478

00:53:34,150 --> 00:53:32,800

that's that's fantastic there'll

1479

00:53:37,190 --> 00:53:34,160

probably be other people

1480

00:53:38,309 --> 00:53:37,200

along um at the convention you can chat

1481

00:53:40,150 --> 00:53:38,319

to interesting people

1482

00:53:42,230 --> 00:53:40,160

there's also a medical panel headed up

1483

00:53:45,270 --> 00:53:42,240

by ken harvey ken harvey of course a

1484

00:53:47,670 --> 00:53:45,280

well-known active uh skeptic

1485

00:53:48,549 --> 00:53:47,680

activist very much so with his

1486

00:53:51,430 --> 00:53:48,559

whack-a-mole

1487

00:53:53,030 --> 00:53:51,440

projects i'll get our friend steve

1488

00:53:54,630 --> 00:53:53,040

roberts who's just about to dive

1489

00:53:56,230 --> 00:53:54,640

as we are all about to dive into our

1490

00:53:58,309 --> 00:53:56,240

lovely coffee here on a cool

1491

00:53:59,510 --> 00:53:58,319

melbourne day to take the photograph the

1492

00:54:00,950 --> 00:53:59,520

official

1493

00:54:02,630 --> 00:54:00,960

photograph of this interview and i'll

1494

00:54:03,510 --> 00:54:02,640

put that up so folks if you're listening

1495

00:54:07,430 --> 00:54:03,520

to this on

1496

00:54:08,150 --> 00:54:07,440

your apple device the chapters that come

1497

00:54:11,030 --> 00:54:08,160

up will have

1498

00:54:12,710 --> 00:54:11,040

an image and you can see us chatting

1499

00:54:15,750 --> 00:54:12,720

there we are click click

1500

00:54:17,670 --> 00:54:15,760

thank you steve well

1501
00:54:19,109 --> 00:54:17,680
hello as i destroy the table behind me

1502
00:54:20,150 --> 00:54:19,119
michelle thank you so much for this

1503
00:54:22,549 --> 00:54:20,160
quick catch up

1504
00:54:24,870 --> 00:54:22,559
it's really exciting and folks if you

1505
00:54:27,349 --> 00:54:24,880
haven't got your ticket for skepticon

1506
00:54:31,109 --> 00:54:27,359
yet don't delay any longer of course the

1507
00:54:32,390 --> 00:54:31,119
website is skeptycon.org.au

1508
00:54:33,750 --> 00:54:32,400
get all the information about the

1509
00:54:34,790 --> 00:54:33,760
speakers you can buy your tickets

1510
00:54:38,069 --> 00:54:34,800
straight away

1511
00:54:38,710 --> 00:54:38,079
and we look forward to seeing you in a

1512
00:54:41,910 --> 00:54:38,720
very

1513
00:54:44,870 --> 00:54:41,920

few number of weeks yes so it all

1514

00:54:46,950 --> 00:54:44,880

takes off with um trivia night on the

1515

00:54:48,789 --> 00:54:46,960

thursday which is just an informal

1516

00:54:51,589 --> 00:54:48,799

fundraiser for us

1517

00:54:52,950 --> 00:54:51,599

at the clyde hotel and then we have our

1518

00:54:55,430 --> 00:54:52,960

meet and greet

1519

00:54:56,789 --> 00:54:55,440

at the dan o'connell hotel on friday

1520

00:54:59,910 --> 00:54:56,799

night where

1521

00:55:00,390 --> 00:54:59,920

uh convention ticket holders can attend

1522

00:55:02,789 --> 00:55:00,400

and just

1523

00:55:04,069 --> 00:55:02,799

mingle with the speakers the committee

1524

00:55:06,950 --> 00:55:04,079

each other

1525

00:55:09,109 --> 00:55:06,960

that's going to be a really fun night um

1526
00:55:11,910 --> 00:55:09,119
then of course the two main days yeah

1527
00:55:13,349 --> 00:55:11,920
off this convention itself excellent and

1528
00:55:14,950 --> 00:55:13,359
folks don't forget too

1529
00:55:17,190 --> 00:55:14,960
but if you come along to skepticon you

1530
00:55:19,670 --> 00:55:17,200
will probably be interviewed by maynard

1531
00:55:20,789 --> 00:55:19,680
because he likes to interview just about

1532
00:55:23,910 --> 00:55:20,799
everybody well

1533
00:55:25,829 --> 00:55:23,920
as the sun tries to speak through

1534
00:55:27,750 --> 00:55:25,839
flinders street above linda street

1535
00:55:29,750 --> 00:55:27,760
station there and the trams rolling by

1536
00:55:31,750 --> 00:55:29,760
michelle bickersmart thank you very much

1537
00:55:38,069 --> 00:55:31,760
thanks richard you're most welcome

1538
00:55:41,430 --> 00:55:39,750

hey guys this is bob novella from the

1539

00:55:43,829 --> 00:55:41,440

skeptic's guide to the universe

1540

00:55:45,670 --> 00:55:43,839

we are so excited to come to australia i

1541

00:55:46,630 --> 00:55:45,680

love australia i love the people but i'm

1542

00:55:49,840 --> 00:55:46,640

really coming down

1543

00:56:00,870 --> 00:55:56,069

[Music]

1544

00:56:10,090 --> 00:56:00,880

hello on our netherlands of this moment

1545

00:56:10,100 --> 00:56:14,829

[Applause]

1546

00:56:14,839 --> 00:56:24,789

tv

1547

00:56:28,950 --> 00:56:26,470

thank you for listening to the skeptic

1548

00:56:30,390 --> 00:56:28,960

zone now it's come to my attention in

1549

00:56:33,510 --> 00:56:30,400

the last week that

1550

00:56:36,230 --> 00:56:33,520

there is a petition doing the rounds

1551
00:56:36,950 --> 00:56:36,240
one of these online petitions to help

1552
00:56:40,069 --> 00:56:36,960
bring back

1553
00:56:42,829 --> 00:56:40,079
tv show i enjoyed watching it was called

1554
00:56:44,150 --> 00:56:42,839
the checkout now technically the

1555
00:56:47,430 --> 00:56:44,160
checkout

1556
00:56:49,270 --> 00:56:47,440
is on hiatus and

1557
00:56:51,190 --> 00:56:49,280
i don't know what that means but it

1558
00:56:54,309 --> 00:56:51,200
hasn't come back to our screens in

1559
00:56:57,670 --> 00:56:54,319
over a year this is an australian show

1560
00:56:58,710 --> 00:56:57,680
all about consumer affairs what are your

1561
00:57:01,510 --> 00:56:58,720
rights

1562
00:57:03,270 --> 00:57:01,520
but it was much admired in the skeptical

1563
00:57:06,710 --> 00:57:03,280

community because of its

1564

00:57:09,430 --> 00:57:06,720

uh very strong stand against things like

1565

00:57:11,430 --> 00:57:09,440

quackery and pharmacy and calling out

1566

00:57:15,270 --> 00:57:11,440

homeopathy for the

1567

00:57:17,270 --> 00:57:15,280

nonsense that it is now i will link

1568

00:57:18,870 --> 00:57:17,280

to that petition in the show notes if

1569

00:57:20,630 --> 00:57:18,880

you're in australia and you enjoyed

1570

00:57:23,190 --> 00:57:20,640

watching the checkout

1571

00:57:25,190 --> 00:57:23,200

um it might be worth signing this

1572

00:57:27,349 --> 00:57:25,200

petition and hopefully the show can come

1573

00:57:27,990 --> 00:57:27,359

back i'll also link in this week's show

1574

00:57:30,710 --> 00:57:28,000

notes to

1575

00:57:31,109 --> 00:57:30,720

one of the videos from the checkout

1576

00:57:34,390 --> 00:57:31,119

which

1577

00:57:37,750 --> 00:57:34,400

really rips into pharmacies in australia

1578

00:57:39,109 --> 00:57:37,760

for selling nonsense and sadly most

1579

00:57:42,150 --> 00:57:39,119

pharmacies

1580

00:57:43,430 --> 00:57:42,160

stock quackery i'm also very excited

1581

00:57:45,910 --> 00:57:43,440

about the upcoming

1582

00:57:47,910 --> 00:57:45,920

skepticon in melbourne i'll be there

1583

00:57:48,870 --> 00:57:47,920

with maynard running around doing

1584

00:57:50,150 --> 00:57:48,880

interviews

1585

00:57:52,549 --> 00:57:50,160

and i think the good people the

1586

00:57:54,470 --> 00:57:52,559

victorian skeptics will put me to

1587

00:57:56,390 --> 00:57:54,480

other work while i'm down there there's

1588

00:57:56,789 --> 00:57:56,400

a good chance folks a very good chance

1589

00:57:59,190 --> 00:57:56,799

that

1590

00:58:00,710 --> 00:57:59,200

if you come along to skepticon you'll be

1591

00:58:02,069 --> 00:58:00,720

interviewed for the skeptic's own

1592

00:58:03,750 --> 00:58:02,079

podcast

1593

00:58:05,670 --> 00:58:03,760

and if you see me or may not running

1594

00:58:08,950 --> 00:58:05,680

around with microphones

1595

00:58:11,349 --> 00:58:08,960

say hello a big thank you a big shout

1596

00:58:13,190 --> 00:58:11,359

out as ever to those wonderful people

1597

00:58:14,950 --> 00:58:13,200

wonderful listeners who support the

1598

00:58:19,030 --> 00:58:14,960

skeptic zone financially

1599

00:58:21,510 --> 00:58:19,040

paypal or patreon at skepticzone.tv

1600

00:58:23,270 --> 00:58:21,520

and it can only be a couple of dollars a

1601
00:58:24,230 --> 00:58:23,280
week but you know what if enough people

1602
00:58:26,870 --> 00:58:24,240
do it

1603
00:58:27,670 --> 00:58:26,880
it adds up and means the show can keep

1604
00:58:30,150 --> 00:58:27,680
going

1605
00:58:31,190 --> 00:58:30,160
and what's a couple of dollars a week

1606
00:58:33,589 --> 00:58:31,200
what's three dollars

1607
00:58:35,190 --> 00:58:33,599
what's five dollars a week it's money

1608
00:58:38,950 --> 00:58:35,200
you'll never miss

1609
00:58:42,230 --> 00:58:38,960
but collectively it means a lot

1610
00:58:42,870 --> 00:58:42,240
here at the skeptic zone but for this

1611
00:58:45,109 --> 00:58:42,880
week

1612
00:58:50,870 --> 00:58:45,119
this is richard saunders signing off

1613
00:58:52,630 --> 00:58:50,880

from sydney australia

1614

00:58:54,069 --> 00:58:52,640

you've been listening to the skeptic

1615

00:58:57,309 --> 00:58:54,079

zone podcast

1616

00:58:58,630 --> 00:58:57,319

please visit our website at

1617

00:59:01,750 --> 00:58:58,640

www.skepticzone.tv

1618

00:59:03,750 --> 00:59:01,760

for show notes contacts and to access

1619

00:59:07,270 --> 00:59:03,760

the back catalog of episodes

1620

00:59:09,349 --> 00:59:07,280

going back to 2008. you can follow the

1621

00:59:12,789 --> 00:59:09,359

skepticzone podcast on twitter

1622

00:59:16,309 --> 00:59:12,799

at [skepticzone](https://www.facebook.com/skepticzone) visit our facebook page

1623

00:59:17,750 --> 00:59:16,319

or leave a review on itunes you can also

1624

00:59:20,950 --> 00:59:17,760

support the skeptic zone

1625

00:59:21,670 --> 00:59:20,960

via [patreon](https://www.patreon.com/skepticzone) or [paypal](https://www.paypal.com/donate/?url=https%3A%2F%2Fskepticzone.com) the skeptic zone

1626

00:59:24,630 --> 00:59:21,680

podcast

1627

00:59:26,390 --> 00:59:24,640

is an independent production the views

1628

00:59:26,789 --> 00:59:26,400

and opinions expressed on the skeptic

1629

00:59:28,789 --> 00:59:26,799

zone

1630

00:59:30,710 --> 00:59:28,799

are not necessarily those of australian

1631

00:59:32,330 --> 00:59:30,720

skeptics or any other