

The Skeptic Zone

Show 245 - 30 June 2013



Rose Shapiro

1
00:00:22,180 --> 00:00:09,100
welcome to the skeptic zone the podcast

2
00:00:29,000 --> 00:00:24,800
hello and welcome to the skeptics are an

3
00:00:31,670 --> 00:00:29,010
episode number 245 for the 30th of jun

4
00:00:34,340 --> 00:00:31,680
2013 Richard Saunders here with you from

5
00:00:37,810 --> 00:00:34,350
Sydney Australia where they're blue

6
00:00:40,790 --> 00:00:37,820
skies have returned if only for a moment

7
00:00:42,410 --> 00:00:40,800
and the ground is soggy and soaked and

8
00:00:43,880 --> 00:00:42,420
the waters have been splashing and

9
00:00:46,490 --> 00:00:43,890
everyone's been building arcs and

10
00:00:49,310 --> 00:00:46,500
collecting their animals two-by-two but

11
00:00:52,010 --> 00:00:49,320
I think it might find up soon coming up

12
00:00:54,260 --> 00:00:52,020
on this week's show dr. Richie reports

13
00:00:57,620 --> 00:00:54,270

dr. Reggie reports an interview she

14

00:00:59,120 --> 00:00:57,630

conducted at the recent ish QED

15

00:01:02,000 --> 00:00:59,130

conference in Manchester and what a

16

00:01:04,270 --> 00:01:02,010

great time we had their doctor 'he

17

00:01:07,790 --> 00:01:04,280

interviews row shapiro about her book

18

00:01:11,840 --> 00:01:07,800

suckers how alternative medicine makes

19

00:01:13,910 --> 00:01:11,850

fools of us all of us all away hmm that

20

00:01:15,950 --> 00:01:13,920

interview coming up with rose shapiro at

21

00:01:17,510 --> 00:01:15,960

the top of the show following that it's

22

00:01:18,950 --> 00:01:17,520

a week in science another week in

23

00:01:20,680 --> 00:01:18,960

science with our good friend dr. Paul

24

00:01:23,840 --> 00:01:20,690

Willis from the Royal Institution of

25

00:01:25,400 --> 00:01:23,850

Australia wow what a great job they do i

26

00:01:27,910 --> 00:01:25,410

really enjoy a week in science and

27

00:01:30,109 --> 00:01:27,920

really um it really reminds us all that

28

00:01:33,109 --> 00:01:30,119

science is ongoing and the news out

29

00:01:35,990 --> 00:01:33,119

there is just well never-ending good

30

00:01:38,870 --> 00:01:36,000

stuff following that we're going to play

31

00:01:42,949 --> 00:01:38,880

a clip from federal parliament how about

32

00:01:45,230 --> 00:01:42,959

that greens senator dr. Richard Di

33

00:01:47,690 --> 00:01:45,240

Natale made a speech in the last week

34

00:01:50,150 --> 00:01:47,700

concerning the Australian vaccination

35

00:01:52,400 --> 00:01:50,160

network now I had a letter not so long

36

00:01:54,740 --> 00:01:52,410

ago saying all the skeptics and I enjoy

37

00:01:56,779 --> 00:01:54,750

the skeptic zone but you know what I'm

38

00:02:00,020 --> 00:01:56,789

getting so sick of hearing about the the

39

00:02:02,120 --> 00:02:00,030

vaccination issues well it's important

40

00:02:05,150 --> 00:02:02,130

issues so we're going to keep

41

00:02:07,490 --> 00:02:05,160

broadcasting news about it and this is

42

00:02:10,130 --> 00:02:07,500

particularly significant this is a

43

00:02:12,290 --> 00:02:10,140

speech in our federal parliament the

44

00:02:14,839 --> 00:02:12,300

Parliament of Australia concerning the

45

00:02:17,059 --> 00:02:14,849

Australian vaccination at work I think

46

00:02:19,430 --> 00:02:17,069

you'll find it very interesting and then

47

00:02:21,559 --> 00:02:19,440

to round off the show Maynard spooky

48

00:02:25,360 --> 00:02:21,569

action may not speak to jonathan roberts

49

00:02:30,530 --> 00:02:25,370

from the CSIRO about robot science

50

00:02:32,360 --> 00:02:30,540

robots and laser imaging it's straying a

51
00:02:34,270 --> 00:02:32,370
little bit from skepticism I'll grant

52
00:02:37,510 --> 00:02:34,280
you that but wow what an interesting

53
00:02:39,760 --> 00:02:37,520
and fascinating interview it is robots

54
00:02:42,490 --> 00:02:39,770
and layers of vision well worth a listen

55
00:02:44,980 --> 00:02:42,500
and to be honest folks where would we be

56
00:02:48,580 --> 00:02:44,990
without Maynard any spooky action I

57
00:02:50,440 --> 00:02:48,590
wonder and I'm so so sorry that Maynard

58
00:02:52,500 --> 00:02:50,450
won't be joining us this year at the

59
00:02:56,140 --> 00:02:52,510
amazing meeting at tab because I know

60
00:02:58,720 --> 00:02:56,150
what a great time he had last year

61
00:03:01,510 --> 00:02:58,730
running around like crazy who was like

62
00:03:03,640 --> 00:03:01,520
the golden flash he was wearing a golden

63
00:03:05,820 --> 00:03:03,650

blazer or a code of some description

64

00:03:08,620 --> 00:03:05,830

like you'd see in a las vegas lounge

65

00:03:10,000 --> 00:03:08,630

interviewing everybody and anybody and

66

00:03:12,270 --> 00:03:10,010

running outside and interviewing the

67

00:03:15,040 --> 00:03:12,280

dogs and the cats and he was just

68

00:03:17,710 --> 00:03:15,050

incredible and skeptics and listeners

69

00:03:19,809 --> 00:03:17,720

will will remember his interviews from

70

00:03:20,979 --> 00:03:19,819

the amazing meeting last year went for

71

00:03:23,320 --> 00:03:20,989

months and months it was just fantastic

72

00:03:24,910 --> 00:03:23,330

so may not I'm sorry you can't be with

73

00:03:27,100 --> 00:03:24,920

us this year at the amazing meeting

74

00:03:28,449 --> 00:03:27,110

we're gonna have a great time we'll try

75

00:03:30,220 --> 00:03:28,459

and have a great time without Maynard

76

00:03:32,500 --> 00:03:30,230

I'm looking forward to giving my talk

77

00:03:35,170 --> 00:03:32,510

looking into the mind of the true

78

00:03:38,170 --> 00:03:35,180

believer or I'll discussing psychics and

79

00:03:39,850 --> 00:03:38,180

power bands and water diviners and

80

00:03:42,000 --> 00:03:39,860

firewalkers and things like that and

81

00:03:45,610 --> 00:03:42,010

I'll be in the big hall just outside the

82

00:03:47,430 --> 00:03:45,620

main auditorium doing water divining

83

00:03:51,250 --> 00:03:47,440

demonstrations Power Balance

84

00:03:53,350 --> 00:03:51,260

demonstrations and making more agami I

85

00:03:55,509 --> 00:03:53,360

hope if you're coming to the amazing

86

00:03:57,550 --> 00:03:55,519

meeting I do hope you'll come by and say

87

00:04:00,699 --> 00:03:57,560

hello I don't think I'll be hard to find

88

00:04:03,699 --> 00:04:00,709

and speaking of skeptical conventions

89

00:04:06,370 --> 00:04:03,709

big news tickets for the Australian

90

00:04:09,759 --> 00:04:06,380

skeptics national convention go on sale

91

00:04:11,590 --> 00:04:09,769

from July the first which is well

92

00:04:15,460 --> 00:04:11,600

tomorrow or if you're hearing this is

93

00:04:17,650 --> 00:04:15,470

probably today or yesterday or you

94

00:04:19,870 --> 00:04:17,660

better check this out tickets for the

95

00:04:21,279 --> 00:04:19,880

Australian skeptics national convention

96

00:04:24,190 --> 00:04:21,289

to be held in camera in November are

97

00:04:25,900 --> 00:04:24,200

available from July the first says the

98

00:04:27,940 --> 00:04:25,910

website the convention will be held at

99

00:04:29,710 --> 00:04:27,950

the CSIRO discovery center in Canberra

100

00:04:32,620 --> 00:04:29,720

from the 20 seconds and 24th and

101
00:04:35,980 --> 00:04:32,630
November the theme is landing on the

102
00:04:39,130 --> 00:04:35,990
truth science skepticism and conspiracy

103
00:04:41,230 --> 00:04:39,140
theories this convention is timed to

104
00:04:44,649 --> 00:04:41,240
coincide with the 50th anniversary of

105
00:04:46,870 --> 00:04:44,659
the assassination of JFK not to mention

106
00:04:48,220 --> 00:04:46,880
the first Doctor Who program the

107
00:04:50,710 --> 00:04:48,230
featured internationals

108
00:04:52,570 --> 00:04:50,720
speaker is Professor Chris French head

109
00:04:55,120 --> 00:04:52,580
of the anomalistic psychology research

110
00:04:57,640 --> 00:04:55,130
unit at the psychology department of

111
00:05:01,180 --> 00:04:57,650
Goldsmiths University of London seats

112
00:05:03,370 --> 00:05:01,190
are limited so get your tickets as

113
00:05:07,630 --> 00:05:03,380

quickly as you can if you want to get

114

00:05:12,820 --> 00:05:07,640

your tickets don't hesitate head for www

115

00:05:14,950 --> 00:05:12,830

a Chanel skeptics convention org now you

116

00:05:18,160 --> 00:05:14,960

are national skeptics convention org

117

00:05:19,630 --> 00:05:18,170

news about the agenda the venue the

118

00:05:21,460 --> 00:05:19,640

speaker's the accommodation dinner

119

00:05:22,810 --> 00:05:21,470

you're looking forward to the dinner

120

00:05:24,430 --> 00:05:22,820

we're going to hand out the bent spoon

121

00:05:27,430 --> 00:05:24,440

award that should be fun last year went

122

00:05:29,500 --> 00:05:27,440

to went to the homeopath is and other

123

00:05:31,720 --> 00:05:29,510

information national skeptics convention

124

00:05:33,760 --> 00:05:31,730

dog i'll be there giving a talk looking

125

00:05:37,180 --> 00:05:33,770

forward to that lots of fine people and

126

00:05:40,260 --> 00:05:37,190

good times and just before we kick off

127

00:05:43,330 --> 00:05:40,270

the show good news well good news for me

128

00:05:45,700 --> 00:05:43,340

very good news for me i'm finally over

129

00:05:47,230 --> 00:05:45,710

the rotten sinus infection i had thank

130

00:05:50,950 --> 00:05:47,240

you to all those people who wrote with

131

00:05:52,060 --> 00:05:50,960

the suggestions and just showing me

132

00:05:54,160 --> 00:05:52,070

their concern that was very touching

133

00:05:56,500 --> 00:05:54,170

thank you very much it's wonderful to be

134

00:05:58,480 --> 00:05:56,510

better again no folks I i hope you'll

135

00:06:00,670 --> 00:05:58,490

never get a sinus infection it's time

136

00:06:02,440 --> 00:06:00,680

for me to run downstairs reach into the

137

00:06:04,120 --> 00:06:02,450

freezer even though it's winter here

138

00:06:07,080 --> 00:06:04,130

Australian it's been cold and wet and

139

00:06:09,880 --> 00:06:07,090

miserable I think I'll have a nice um

140

00:06:12,070 --> 00:06:09,890

frozen yogurt yeah why not yeah they're

141

00:06:28,059 --> 00:06:12,080

very tasty well I'm doing that I hope

142

00:06:37,070 --> 00:06:31,430

now it's time for dr. Rachel reports

143

00:06:39,710 --> 00:06:37,080

with dr. Rachel Dunlop hi so we're here

144

00:06:41,180 --> 00:06:39,720

at QED with rose Shapiro hi rose hello

145

00:06:43,730 --> 00:06:41,190

how are you enjoying the conference I'm

146

00:06:45,950 --> 00:06:43,740

having a great time as fabulous good so

147

00:06:47,659 --> 00:06:45,960

you gave an interview yesterday about

148

00:06:50,119 --> 00:06:47,669

your book suckers how alternative

149

00:06:51,649 --> 00:06:50,129

medicine makes fools of us all but your

150

00:06:53,570 --> 00:06:51,659

background comes from journalism doesn't

151
00:06:55,399 --> 00:06:53,580
it from working in magazines yes that's

152
00:06:57,409 --> 00:06:55,409
right I've worked in the mainstream

153
00:07:01,040 --> 00:06:57,419
press for quite a long time particularly

154
00:07:02,749 --> 00:07:01,050
in women's magazines and also in the

155
00:07:05,600 --> 00:07:02,759
health trade press as a health writer

156
00:07:08,149 --> 00:07:05,610
and through that you came across ult med

157
00:07:12,680 --> 00:07:08,159
didn't you yes very much so in the in

158
00:07:15,770 --> 00:07:12,690
women's magazines mainly as in a strange

159
00:07:18,020 --> 00:07:15,780
blurry hinterland between beauty and

160
00:07:20,330 --> 00:07:18,030
health I think it's where it occupies it

161
00:07:23,809 --> 00:07:20,340
yes so tell us how you came to write the

162
00:07:25,219 --> 00:07:23,819
book well I'd wanted I'd been interested

163
00:07:27,080 --> 00:07:25,229

in the area for a very long time and

164

00:07:31,040 --> 00:07:27,090

getting kind of gradually simmering and

165

00:07:32,209 --> 00:07:31,050

simmering Lee angry about various claims

166

00:07:34,520 --> 00:07:32,219

that were being made in a way that

167

00:07:38,390 --> 00:07:34,530

people seem to be taking them up without

168

00:07:41,990 --> 00:07:38,400

any kind of critical thinking and I was

169

00:07:45,110 --> 00:07:42,000

really triggered to write it by a few in

170

00:07:47,180 --> 00:07:45,120

fact a few cases of people I knew who in

171

00:07:50,899 --> 00:07:47,190

a great health crisis we're turning to

172

00:07:53,420 --> 00:07:50,909

alternative practitioners and I just I

173

00:07:55,790 --> 00:07:53,430

got to enough is enough point and really

174

00:07:58,010 --> 00:07:55,800

wanted to do something and you were

175

00:07:59,659 --> 00:07:58,020

telling me yesterday that now when your

176

00:08:00,909 --> 00:07:59,669

friends ask you about what you've done

177

00:08:03,920 --> 00:08:00,919

and you say you've written a book about

178

00:08:05,450 --> 00:08:03,930

augmenting you used to say that and what

179

00:08:08,240 --> 00:08:05,460

would the boiler reaction would be well

180

00:08:09,860 --> 00:08:08,250

what used when I was right whilst I was

181

00:08:11,180 --> 00:08:09,870

writing it if somebody asked me what I

182

00:08:12,800 --> 00:08:11,190

was doing I say I'm writing a book about

183

00:08:14,719 --> 00:08:12,810

alternative medicine and they've kind of

184

00:08:17,600 --> 00:08:14,729

either gonna glaze over thinking oh my

185

00:08:20,809 --> 00:08:17,610

god what she's supporting or assume it

186

00:08:22,939 --> 00:08:20,819

was in support and that led to various

187

00:08:24,660 --> 00:08:22,949

confusing and slightly upsetting

188

00:08:27,600 --> 00:08:24,670

conversations probably

189

00:08:29,760 --> 00:08:27,610

and so I decided to shorten that so that

190

00:08:32,460 --> 00:08:29,770

when they asked me and and all anybody

191

00:08:34,620 --> 00:08:32,470

asked me what it is now I just say it's

192

00:08:36,330 --> 00:08:34,630

a book attacking alternative medicine so

193

00:08:38,370 --> 00:08:36,340

we know where we are but even then

194

00:08:40,440 --> 00:08:38,380

people find it hard to credit that it's

195

00:08:42,390 --> 00:08:40,450

possible certainly for a middle-aged

196

00:08:45,540 --> 00:08:42,400

middle-class woman to take this position

197

00:08:47,160 --> 00:08:45,550

I think his is a bit of a surprise so

198

00:08:49,950 --> 00:08:47,170

what sort of things do you cover in the

199

00:08:53,160 --> 00:08:49,960

book what alt meds do you look at I I

200

00:08:55,470 --> 00:08:53,170

tried to look at everything and anything

201
00:08:59,090 --> 00:08:55,480
that seemed to be making claims without

202
00:09:03,240 --> 00:08:59,100
evidence within the alternative range

203
00:09:05,130 --> 00:09:03,250
and so and it's in it was a weird thing

204
00:09:09,840 --> 00:09:05,140
because in a way they are all exactly

205
00:09:12,410 --> 00:09:09,850
the same and it was quite a difficult

206
00:09:14,970 --> 00:09:12,420
thing to find a way of telling

207
00:09:18,210 --> 00:09:14,980
describing each of their claims in each

208
00:09:21,210 --> 00:09:18,220
of their ideas and all ways in which

209
00:09:23,040 --> 00:09:21,220
they operate without repeating myself

210
00:09:25,590 --> 00:09:23,050
but I hope I've got away with that yeah

211
00:09:26,700 --> 00:09:25,600
so you were talking yesterday about one

212
00:09:28,890 --> 00:09:26,710
of the things you're interested in his

213
00:09:31,440 --> 00:09:28,900

alternative medicine for cancer yes and

214

00:09:33,270 --> 00:09:31,450

you came across a woman who is

215

00:09:36,960 --> 00:09:33,280

Australian actual that's right yes

216

00:09:40,740 --> 00:09:36,970

there's a woman I called Robin Welsh

217

00:09:43,140 --> 00:09:40,750

who's a medical intuitive is how she

218

00:09:46,260 --> 00:09:43,150

describes herself and she does her

219

00:09:49,190 --> 00:09:46,270

healing via a landline I think only so I

220

00:09:53,160 --> 00:09:49,200

don't know how things work out in 2013

221

00:09:56,880 --> 00:09:53,170

but she may bit but as I think as I

222

00:09:59,430 --> 00:09:56,890

found the alternative practitioners are

223

00:10:01,620 --> 00:09:59,440

infinitely adjustable they can find that

224

00:10:03,810 --> 00:10:01,630

they do suddenly find new energies that

225

00:10:06,690 --> 00:10:03,820

operate on a mobile phone that they were

226

00:10:09,930 --> 00:10:06,700

not aware of until now so maybe she's up

227

00:10:12,150 --> 00:10:09,940

to date yeah because she was she has she

228

00:10:14,100 --> 00:10:12,160

has issues with vibrations coming from

229

00:10:16,740 --> 00:10:14,110

phones and cameras and things I think

230

00:10:19,500 --> 00:10:16,750

she does yes I think I think they're

231

00:10:22,110 --> 00:10:19,510

negative energies which I'm sure must

232

00:10:26,040 --> 00:10:22,120

fog up the communication systems in a

233

00:10:27,720 --> 00:10:26,050

way we I just don't understand so you

234

00:10:29,850 --> 00:10:27,730

have investigated quite a lot of

235

00:10:31,620 --> 00:10:29,860

alternative things for cancer what a man

236

00:10:34,960 --> 00:10:31,630

come across that has really made you

237

00:10:40,119 --> 00:10:34,970

angry or disappointed or up

238

00:10:42,519 --> 00:10:40,129

I think anything that leads people to

239

00:10:44,319 --> 00:10:42,529

have those hope because i think it's the

240

00:10:46,600 --> 00:10:44,329

cruellest thing to do to a person who's

241

00:10:49,210 --> 00:10:46,610

facing a serious illness i can

242

00:10:51,699 --> 00:10:49,220

understand how appealing it is i've had

243

00:10:53,350 --> 00:10:51,709

breast cancer myself and i know at the

244

00:10:55,749 --> 00:10:53,360

moment when you're embarking on

245

00:10:58,990 --> 00:10:55,759

chemotherapy the idea of having a flower

246

00:11:01,710 --> 00:10:59,000

remedy instead is just is it's wonderful

247

00:11:05,619 --> 00:11:01,720

because it's a very hard road to travel

248

00:11:08,769 --> 00:11:05,629

if you have conventional treatment and

249

00:11:11,050 --> 00:11:08,779

so so that force that part of it that's

250

00:11:13,540 --> 00:11:11,060

the false hope i think is it's really

251
00:11:17,860 --> 00:11:13,550
the worst thing the thing that annoys me

252
00:11:20,829 --> 00:11:17,870
in inaccurate ated way is people who

253
00:11:23,379 --> 00:11:20,839
have conventional treatment and then

254
00:11:26,740 --> 00:11:23,389
after that do some sort of wheatgrass

255
00:11:29,050 --> 00:11:26,750
drink or flaxseed oil or acupuncture and

256
00:11:32,290 --> 00:11:29,060
attribute their survival to the

257
00:11:35,860 --> 00:11:32,300
acupuncture when they've had surgery

258
00:11:38,470 --> 00:11:35,870
radiotherapy chemotherapy or one of all

259
00:11:40,269 --> 00:11:38,480
of those and then do that attribution I

260
00:11:41,829 --> 00:11:40,279
find it very irritating do you have any

261
00:11:43,840 --> 00:11:41,839
understanding as to why people do that

262
00:11:47,530 --> 00:11:43,850
what is the psychology behind that I

263
00:11:49,179 --> 00:11:47,540

think there is um I mean I have to say

264

00:11:51,189 --> 00:11:49,189

that I think that people who use

265

00:11:54,100 --> 00:11:51,199

alternative medicine clearly like using

266

00:11:55,809 --> 00:11:54,110

it and find it very helpful and

267

00:11:57,579 --> 00:11:55,819

empowering and I think that's probably

268

00:11:59,829 --> 00:11:57,589

the key particularly in relation to

269

00:12:01,240 --> 00:11:59,839

cancer because cancer makes you feel

270

00:12:03,579 --> 00:12:01,250

that you have no power that you have

271

00:12:05,290 --> 00:12:03,589

your you're confronting something that

272

00:12:08,470 --> 00:12:05,300

is bigger than you are and I think

273

00:12:11,470 --> 00:12:08,480

alternative medicine keys in really

274

00:12:14,049 --> 00:12:11,480

effectively to the need to feel that you

275

00:12:16,689 --> 00:12:14,059

are taking some control but there are

276

00:12:18,429 --> 00:12:16,699

other ways to do that that you that I

277

00:12:21,009 --> 00:12:18,439

don't think are alternative or things

278

00:12:25,119 --> 00:12:21,019

like taking a lot of exercise and all

279

00:12:27,490 --> 00:12:25,129

that enjoying yourself with your friends

280

00:12:30,100 --> 00:12:27,500

which again some of these regimes with

281

00:12:32,259 --> 00:12:30,110

in cancer therapy deny those things to

282

00:12:34,420 --> 00:12:32,269

you say Gerson Therapy where you have to

283

00:12:37,059 --> 00:12:34,430

be met juicing 13 times a day and eating

284

00:12:40,030 --> 00:12:37,069

separately the things that it's worth

285

00:12:42,220 --> 00:12:40,040

living for are denied I mean you told me

286

00:12:44,799 --> 00:12:42,230

a story yesterday about a lady who had

287

00:12:46,960 --> 00:12:44,809

all her teeth removed yes yes there was

288

00:12:47,510 --> 00:12:46,970

one case that was reported by the BBC of

289

00:12:50,750 --> 00:12:47,520

some

290

00:12:55,310 --> 00:12:50,760

d who was following the hall de klerk

291

00:12:57,830 --> 00:12:55,320

who's a now-deceased I think of cancer

292

00:13:00,530 --> 00:12:57,840

yes she does yes she had a magical

293

00:13:03,110 --> 00:13:00,540

zapping cancer cure yes yes and she

294

00:13:05,180 --> 00:13:03,120

believed that all cancers as so many

295

00:13:07,490 --> 00:13:05,190

alternative medicine practitioners do

296

00:13:10,190 --> 00:13:07,500

they have a single cause for all

297

00:13:13,820 --> 00:13:10,200

diseases very often and she believed

298

00:13:16,610 --> 00:13:13,830

that it was caused by a kind of fluke

299

00:13:21,820 --> 00:13:16,620

that occupied the body and toxins the

300

00:13:24,230 --> 00:13:21,830

usual some not ask yes yes yes and a

301

00:13:26,990 --> 00:13:24,240

practitioner who was a I think

302

00:13:30,200 --> 00:13:27,000

practicing her method told a woman who

303

00:13:32,180 --> 00:13:30,210

was in the last few weeks of life with

304

00:13:34,220 --> 00:13:32,190

pancreatic cancer I think that she

305

00:13:36,620 --> 00:13:34,230

needed to have all her teeth removed and

306

00:13:38,180 --> 00:13:36,630

she because they were full of toxins and

307

00:13:40,040 --> 00:13:38,190

that's what was causing the cancer and

308

00:13:42,380 --> 00:13:40,050

so she spent I think five weeks before

309

00:13:46,100 --> 00:13:42,390

she died she had all her teeth removed

310

00:13:49,070 --> 00:13:46,110

by a self-styled holistic dentist cuz

311

00:13:52,280 --> 00:13:49,080

it's is cruelty and exploitation of the

312

00:13:53,870 --> 00:13:52,290

way it is yeah so European what's your

313

00:13:55,400 --> 00:13:53,880

opinion of these sort of integrated

314

00:13:57,410 --> 00:13:55,410

cancer centers that are popping up all

315

00:13:58,970 --> 00:13:57,420

over the place that offer complementary

316

00:14:03,760 --> 00:13:58,980

therapies along with conventional

317

00:14:06,170 --> 00:14:03,770

science-based medicine well I think it's

318

00:14:08,600 --> 00:14:06,180

fundamentally it's a question of what

319

00:14:11,270 --> 00:14:08,610

claims they're making if they're making

320

00:14:13,610 --> 00:14:11,280

any claim beyond this might cheer you up

321

00:14:17,450 --> 00:14:13,620

a bit or make you feel a bit more

322

00:14:18,740 --> 00:14:17,460

relaxed or two so that you might sleep

323

00:14:21,770 --> 00:14:18,750

better because you're more relaxed

324

00:14:24,230 --> 00:14:21,780

that's for me that's where it stops in

325

00:14:28,820 --> 00:14:24,240

terms of it being acceptable and I think

326

00:14:30,620 --> 00:14:28,830

there's a very but because they are it's

327

00:14:33,080 --> 00:14:30,630

very easy to think even if they don't

328

00:14:34,820 --> 00:14:33,090

explicitly say that doing something will

329

00:14:37,460 --> 00:14:34,830

change the course of your illness it

330

00:14:38,810 --> 00:14:37,470

seems very often to me to be easy to

331

00:14:41,000 --> 00:14:38,820

read that between the lines especially

332

00:14:43,520 --> 00:14:41,010

when you're in the state of experience

333

00:14:45,290 --> 00:14:43,530

of cancer the cancer illness so if

334

00:14:47,420 --> 00:14:45,300

someone came to off your foot massage if

335

00:14:49,610 --> 00:14:47,430

they pee yes reflexology rather than and

336

00:14:51,320 --> 00:14:49,620

yes yes yes exactly that might lead i

337

00:14:53,990 --> 00:14:51,330

think it's going to do something yes it

338

00:14:55,010 --> 00:14:54,000

can assist you can yes yeah yeah i mean

339

00:14:57,530 --> 00:14:55,020

you were talking yesterday about the

340

00:14:59,170 --> 00:14:57,540

thin and if thin end of the wedge in

341

00:15:01,660 --> 00:14:59,180

terms of alternative therapies

342

00:15:03,190 --> 00:15:01,670

think he said the the fat end is cancer

343

00:15:08,080 --> 00:15:03,200

and what's up the top in the skinny end

344

00:15:10,450 --> 00:15:08,090

um the skinny end would be homeopathic

345

00:15:13,210 --> 00:15:10,460

teething granules you know I mean

346

00:15:14,860 --> 00:15:13,220

they're they're made of lactose they

347

00:15:17,050 --> 00:15:14,870

cost rather a lot of money for a small

348

00:15:19,330 --> 00:15:17,060

amount of lactose you put them in your

349

00:15:21,040 --> 00:15:19,340

child's mouth and everybody relax is

350

00:15:23,650 --> 00:15:21,050

slightly and maybe the child is having

351
00:15:27,970 --> 00:15:23,660
nice sweet tasting in her mouth and so

352
00:15:31,510 --> 00:15:27,980
she stops bawling but I guess it's a

353
00:15:34,540 --> 00:15:31,520
continuum but I do feel that that the

354
00:15:36,970 --> 00:15:34,550
acceptance of things that are really no

355
00:15:39,190 --> 00:15:36,980
harm to anybody particularly I think

356
00:15:41,860 --> 00:15:39,200
that that has a kind of effect on the

357
00:15:46,570 --> 00:15:41,870
climate that leads people to feel that

358
00:15:48,850 --> 00:15:46,580
the really hard exploitative end is more

359
00:15:50,830 --> 00:15:48,860
acceptable so there's been some

360
00:15:53,410 --> 00:15:50,840
discussion this weekend about NHS

361
00:15:54,550 --> 00:15:53,420
Choices the NHS is the National Health

362
00:15:56,770 --> 00:15:54,560
Service which has recently being

363
00:15:58,510 --> 00:15:56,780

privatized in the UK well it's not as

364

00:16:00,190 --> 00:15:58,520

yet it's more complicated than that but

365

00:16:02,620 --> 00:16:00,200

I don't understand it but fortunately

366

00:16:05,500 --> 00:16:02,630

nobody understands and where say ok but

367

00:16:07,900 --> 00:16:05,510

so by the government offering choices in

368

00:16:10,840 --> 00:16:07,910

terms of say homeopathy as an option in

369

00:16:13,180 --> 00:16:10,850

the from public money that in a ways I

370

00:16:16,210 --> 00:16:13,190

guess the thin end of the wedge in that

371

00:16:17,410 --> 00:16:16,220

people begin to accept it yeah I think I

372

00:16:18,910 --> 00:16:17,420

mean it's going to be interesting to see

373

00:16:23,260 --> 00:16:18,920

how that works out because it isn't

374

00:16:25,210 --> 00:16:23,270

quite like that those choices for

375

00:16:27,580 --> 00:16:25,220

funding have been devolved to a more

376

00:16:30,130 --> 00:16:27,590

local level of general practitioners and

377

00:16:31,780 --> 00:16:30,140

I think quite a lot of them won't want

378

00:16:34,210 --> 00:16:31,790

to pay for it because they're paying for

379

00:16:35,710 --> 00:16:34,220

out of their budget their money and one

380

00:16:37,420 --> 00:16:35,720

would hope that they'll be robust about

381

00:16:39,220 --> 00:16:37,430

it and say you know you do it if you

382

00:16:42,760 --> 00:16:39,230

want to go down to your chemist and buy

383

00:16:44,920 --> 00:16:42,770

this stuff it's up to you but but I hope

384

00:16:46,830 --> 00:16:44,930

that they'll be robust and unref used to

385

00:16:49,840 --> 00:16:46,840

do it yeah and that is happening

386

00:16:52,330 --> 00:16:49,850

increasingly in terms of GP referral

387

00:16:53,920 --> 00:16:52,340

anyway I think so have you got any

388

00:16:55,689 --> 00:16:53,930

players to write another book a sequel

389

00:16:58,659 --> 00:16:55,699

perhaps two suckers or something

390

00:17:00,249 --> 00:16:58,669

no I sort of various things come out of

391

00:17:03,699 --> 00:17:00,259

it and still I'm still doing a lot of

392

00:17:07,379 --> 00:17:03,709

work related to that book and various

393

00:17:09,970 --> 00:17:07,389

things that I'm interested in such as

394

00:17:12,399 --> 00:17:09,980

the ill I did I discover that a lot of

395

00:17:14,169 --> 00:17:12,409

the illnesses that alter that the blood

396

00:17:16,449 --> 00:17:14,179

of people who go to alternative

397

00:17:17,889 --> 00:17:16,459

practitioners have what and often

398

00:17:20,679 --> 00:17:17,899

describes medically unexplained

399

00:17:23,649 --> 00:17:20,689

illnesses and they can they can be

400

00:17:25,409 --> 00:17:23,659

horribly exploited by alternative

401
00:17:27,309 --> 00:17:25,419
practitioners and say people with

402
00:17:31,330 --> 00:17:27,319
conditions like chronic fatigue syndrome

403
00:17:34,149 --> 00:17:31,340
go from one to another because it cut

404
00:17:36,129 --> 00:17:34,159
because if they're promised so much but

405
00:17:39,190 --> 00:17:36,139
but they're not really helped yeah is

406
00:17:40,629 --> 00:17:39,200
that something you've been yes yes well

407
00:17:41,769 --> 00:17:40,639
I hope we do see another book for

408
00:17:43,960 --> 00:17:41,779
memories because we loved your book

409
00:17:45,759 --> 00:17:43,970
adding key my colleague job enemy who's

410
00:17:47,139 --> 00:17:45,769
on the podcast so she uses your book for

411
00:17:48,940 --> 00:17:47,149
references all the time going to

412
00:17:50,919 --> 00:17:48,950
parently got post-it notes and dog ear

413
00:17:52,539 --> 00:17:50,929

really well I did the good thing about

414

00:17:55,210 --> 00:17:52,549

it is because it's all based on ancient

415

00:17:58,389 --> 00:17:55,220

wisdom which never changes it's always

416

00:18:06,830 --> 00:17:58,399

up to date you don't know but thanks for

417

00:18:11,460 --> 00:18:09,420

hi there this is ben Radford from

418

00:18:14,160 --> 00:18:11,470

skeptical inquirer magazine the monster

419

00:18:16,020 --> 00:18:14,170

talk podcast Discovery News skeptical

420

00:18:17,190 --> 00:18:16,030

conferences and elsewhere you may also

421

00:18:19,050 --> 00:18:17,200

know me as the guy that's all the

422

00:18:20,220 --> 00:18:19,060

chupacabra mystery I want to let you

423

00:18:22,680 --> 00:18:20,230

know about a cool new board game I

424

00:18:24,300 --> 00:18:22,690

created called undead apocalypse war of

425

00:18:26,580 --> 00:18:24,310

the damned undead apocalypse has

426

00:18:28,200 --> 00:18:26,590

vampires and werewolves and zombies all

427

00:18:30,690 --> 00:18:28,210

battling it out in a post-apocalyptic

428

00:18:33,150 --> 00:18:30,700

world with humans so it's sort of like

429

00:18:34,350 --> 00:18:33,160

Mad Max meets the walking dead so if

430

00:18:36,150 --> 00:18:34,360

you're interested in zombies and

431

00:18:38,730 --> 00:18:36,160

werewolves and vampires or board games

432

00:18:41,130 --> 00:18:38,740

of any kind or my work please check it

433

00:18:44,070 --> 00:18:41,140

out thanks i appreciate undead

434

00:18:47,150 --> 00:18:44,080

apocalypse the fast pace for game where

435

00:18:50,460 --> 00:18:47,160

you control armies of zombies vampires

436

00:18:53,640 --> 00:18:50,470

werewolves and humans in Earth's final

437

00:18:56,130 --> 00:18:53,650

war of the damned learn more at undead

438

00:19:05,090 --> 00:18:56,140

board game com or support us on

439

00:19:11,730 --> 00:19:08,280

welcome to a week in science from RI oz

440

00:19:14,160 --> 00:19:11,740

this week regrowing nerves genes for

441

00:19:22,600 --> 00:19:14,170

migraines and monkeying around with

442

00:19:26,780 --> 00:19:25,280

we used to think that nerves in the

443

00:19:29,060 --> 00:19:26,790

central nervous system couldn't

444

00:19:31,000 --> 00:19:29,070

regenerate after an injury but new

445

00:19:33,500 --> 00:19:31,010

research has not that on the head

446

00:19:35,330 --> 00:19:33,510

microscopic analysis of damaged nerves

447

00:19:37,490 --> 00:19:35,340

in the central nervous system of mice

448

00:19:39,980 --> 00:19:37,500

reveals that they not only regenerate

449

00:19:41,630 --> 00:19:39,990

but they do so it rates comparable to

450

00:19:43,970 --> 00:19:41,640

the regrowth of other parts of the

451

00:19:46,010 --> 00:19:43,980

nervous system the researchers are

452

00:19:49,010 --> 00:19:46,020

unsure why or how this regeneration

453

00:19:51,530 --> 00:19:49,020

happens but the observation opens up new

454

00:19:55,910 --> 00:19:51,540

areas of research into regrowing damaged

455

00:19:58,460 --> 00:19:55,920

nerves in humans there's good news for

456

00:20:00,950 --> 00:19:58,470

sports fans this week humans have

457

00:20:02,870 --> 00:20:00,960

evolved for throwing a number of

458

00:20:04,730 --> 00:20:02,880

anatomical features in the human

459

00:20:07,370 --> 00:20:04,740

shoulder have been shown to boost

460

00:20:10,250 --> 00:20:07,380

throwing power and accuracy these

461

00:20:12,470 --> 00:20:10,260

shoulder features only appeared after we

462

00:20:15,080 --> 00:20:12,480

started walking upright when the hands

463

00:20:17,420 --> 00:20:15,090

and arms were free these features date

464

00:20:20,660 --> 00:20:17,430

back at least two million years to our

465

00:20:22,850 --> 00:20:20,670

ancestors Homo erectus suggesting their

466

00:20:25,130 --> 00:20:22,860

anatomy developed to throw Spears and

467

00:20:27,380 --> 00:20:25,140

other objects when hunting you're

468

00:20:30,980 --> 00:20:27,390

listening to a week in science from our

469

00:20:33,710 --> 00:20:30,990

iOS and now for size headlines in 30

470

00:20:36,130 --> 00:20:33,720

seconds 12 sites on the human genome

471

00:20:38,990 --> 00:20:36,140

have been linked to migraines and

472

00:20:41,690 --> 00:20:39,000

remember visual clues to help find their

473

00:20:44,120 --> 00:20:41,700

way home plants accurately measure their

474

00:20:45,860 --> 00:20:44,130

stored energy and then calculate how

475

00:20:48,470 --> 00:20:45,870

much to use to last them through the

476

00:20:50,690 --> 00:20:48,480

night and a strong correlation has been

477

00:20:52,730 --> 00:20:50,700

found between people's maths ability and

478

00:20:56,060 --> 00:20:52,740

the likelihood that they will default on

479

00:20:58,670 --> 00:20:56,070

their home mortgage and finally this

480

00:21:01,250 --> 00:20:58,680

week monkeys use social networks to

481

00:21:03,530 --> 00:21:01,260

spread ideas dominant monkeys were

482

00:21:05,720 --> 00:21:03,540

isolated from their troops and shown two

483

00:21:08,420 --> 00:21:05,730

different ways to open a box containing

484

00:21:10,660 --> 00:21:08,430

food either by lifting a flap or

485

00:21:13,370 --> 00:21:10,670

pivoting that flap from side to side

486

00:21:15,560 --> 00:21:13,380

when these monkeys will reintroduce to

487

00:21:18,110 --> 00:21:15,570

their troops researchers followed how

488

00:21:20,150 --> 00:21:18,120

quickly the new behaviors spread they

489

00:21:22,190 --> 00:21:20,160

found that groups organized around a

490

00:21:25,220 --> 00:21:22,200

strong central leader spread the new

491

00:21:28,020 --> 00:21:25,230

ideas more quickly

492

00:21:30,690 --> 00:21:28,030

arias goes to Western Australia next

493

00:21:33,330 --> 00:21:30,700

month for a special event in Albany

494

00:21:35,760 --> 00:21:33,340

we're asking what the future holds for

495

00:21:38,340 --> 00:21:35,770

regional towns like alberni in the face

496

00:21:40,790 --> 00:21:38,350

of impending global problems more

497

00:21:44,340 --> 00:21:40,800

details can be found on our website

498

00:21:46,530 --> 00:21:44,350

re-org a you that's been the highlights

499

00:21:48,660 --> 00:21:46,540

of another big week in science for more

500

00:21:53,370 --> 00:21:48,670

information and other science news check

501
00:21:55,470 --> 00:21:53,380
out the rirs website RI aus org a you

502
00:21:58,530 --> 00:21:55,480
where you can also sign up for

503
00:22:00,330 --> 00:21:58,540
notifications of future episodes you can

504
00:22:03,690 --> 00:22:00,340
follow a week in science on twitter

505
00:22:06,720 --> 00:22:03,700
using the hashtag week inside i'm paul

506
00:22:18,799 --> 00:22:06,730
willis and on behalf of the RAS teen see

507
00:22:22,730 --> 00:22:20,960
be reasonable is a podcast of the

508
00:22:24,950 --> 00:22:22,740
Merseyside skeptics society featuring

509
00:22:27,019 --> 00:22:24,960
hayley stevens and Michael Marshall each

510
00:22:29,269 --> 00:22:27,029
monthly interview explores beliefs from

511
00:22:30,769 --> 00:22:29,279
outside of the mainstream engaging with

512
00:22:32,570 --> 00:22:30,779
proponents of those beliefs to examine

513
00:22:35,539 --> 00:22:32,580

the evidence and reasoning behind each

514

00:22:37,639 --> 00:22:35,549

idea in June's episode we speak with

515

00:22:39,409 --> 00:22:37,649

novena shine who made the headlines with

516

00:22:42,320 --> 00:22:39,419

her attempt to live for six months

517

00:22:44,629 --> 00:22:42,330

without food listen to novena story and

518

00:22:47,029 --> 00:22:44,639

back issues of the show by visiting

519

00:22:49,009 --> 00:22:47,039

merseyside skeptics talked at UK forward

520

00:23:06,109 --> 00:22:49,019

slash podcasts or search for be

521

00:23:08,090 --> 00:23:06,119

reasonable on itunes pressure continues

522

00:23:11,840 --> 00:23:08,100

to rise on the Australian vaccination

523

00:23:13,700 --> 00:23:11,850

network to shut down this week stop the

524

00:23:16,070 --> 00:23:13,710

Australian vaccination Network which was

525

00:23:18,320 --> 00:23:16,080

established over four years ago got a

526
00:23:21,249 --> 00:23:18,330
shout-out in federal parliament when

527
00:23:23,810 --> 00:23:21,259
greens senator dr. Richard Di Natale

528
00:23:25,820 --> 00:23:23,820
introduced a motion to Parliament to

529
00:23:29,480 --> 00:23:25,830
request the Australian vaccination

530
00:23:31,430 --> 00:23:29,490
network to be disbanded immediately the

531
00:23:34,039 --> 00:23:31,440
motion was voted in unanimously on

532
00:23:36,200 --> 00:23:34,049
Tuesday and on Thursday he made a ten

533
00:23:38,659 --> 00:23:36,210
minute long speech detailing the reasons

534
00:23:40,909 --> 00:23:38,669
why the Australian vaccination at work

535
00:23:43,220 --> 00:23:40,919
needed to be stopped we'll play a

536
00:23:45,109 --> 00:23:43,230
section from that speech in a moment but

537
00:23:47,090 --> 00:23:45,119
just to remind listeners this is not the

538
00:23:50,060 --> 00:23:47,100

first time the Australian vaccination at

539

00:23:53,299 --> 00:23:50,070

work or avian have got a mention in

540

00:23:54,739 --> 00:23:53,309

Parliament in a derogatory sense but

541

00:23:57,739 --> 00:23:54,749

this is the first time a federal

542

00:23:59,779 --> 00:23:57,749

politician has become involved in New

543

00:24:01,820 --> 00:23:59,789

South Wales there has been several

544

00:24:03,730 --> 00:24:01,830

occasions where politicians of all

545

00:24:07,190 --> 00:24:03,740

colors have stood shoulder to shoulder

546

00:24:09,739 --> 00:24:07,200

united in their damnation of the avian

547

00:24:11,269 --> 00:24:09,749

dr a cheese blog details some of the

548

00:24:13,820 --> 00:24:11,279

exits from the New South Wales

549

00:24:15,619 --> 00:24:13,830

statements and I'll link to this in the

550

00:24:17,840 --> 00:24:15,629

show notes but what does all this mean

551
00:24:20,330 --> 00:24:17,850
well probably not a whole lot in

552
00:24:22,399 --> 00:24:20,340
practical terms there is not much the

553
00:24:25,249 --> 00:24:22,409
federal government can do about the

554
00:24:27,950 --> 00:24:25,259
avian hence the use of the terms request

555
00:24:30,109 --> 00:24:27,960
to shut down however what this does do

556
00:24:31,690 --> 00:24:30,119
is to add another government body to the

557
00:24:34,090 --> 00:24:31,700
long list of Department

558
00:24:36,820 --> 00:24:34,100
who clearly have the avian in their

559
00:24:39,310 --> 00:24:36,830
sights it also sends a strong message to

560
00:24:41,740 --> 00:24:39,320
the public that the avian is not a

561
00:24:44,259 --> 00:24:41,750
reliable or respectable source for

562
00:24:47,620 --> 00:24:44,269
information and it totally and

563
00:24:49,960 --> 00:24:47,630

thoroughly annoyed the avian so much so

564

00:24:52,419 --> 00:24:49,970

that their new president greg BTW call

565

00:24:54,610 --> 00:24:52,429

up senator didn't tally and gave him a

566

00:24:56,919 --> 00:24:54,620

piece of his mind so to speak how do we

567

00:25:00,039 --> 00:24:56,929

know this well because he recorded the

568

00:25:02,500 --> 00:25:00,049

conversation mostly only his side can be

569

00:25:04,840 --> 00:25:02,510

heard and merrill dory posted it on a

570

00:25:07,269 --> 00:25:04,850

blog BTW can be heard raising his voice

571

00:25:10,269 --> 00:25:07,279

of the senator and pretty much sounding

572

00:25:12,580 --> 00:25:10,279

like a petulant toddler which is bad

573

00:25:14,590 --> 00:25:12,590

enough but may not be the worst thing

574

00:25:17,110 --> 00:25:14,600

about this call in some parts of

575

00:25:19,269 --> 00:25:17,120

australia it is illegal to record and

576

00:25:22,120 --> 00:25:19,279

broadcast phone calls without the other

577

00:25:24,250 --> 00:25:22,130

person's permission which is why in this

578

00:25:26,680 --> 00:25:24,260

country many call centers have phrases

579

00:25:28,240 --> 00:25:26,690

like this call will be recorded please

580

00:25:30,700 --> 00:25:28,250

advise if you don't want this to happen

581

00:25:33,159 --> 00:25:30,710

it seems doubtful that BTW has the

582

00:25:36,460 --> 00:25:33,169

permission from center to denote ali to

583

00:25:38,320 --> 00:25:36,470

broadcast this conversation so he may be

584

00:25:40,360 --> 00:25:38,330

in trouble for a lot more than just

585

00:25:42,909 --> 00:25:40,370

spreading misinformation about

586

00:25:45,279 --> 00:25:42,919

vaccinations we'll keep you posted if

587

00:25:47,680 --> 00:25:45,289

there are any further developments in

588

00:25:50,860 --> 00:25:47,690

the meantime here is the audio from

589

00:25:53,049 --> 00:25:50,870

senator dinatale speech which was posted

590

00:25:55,649 --> 00:25:53,059

on youtube and should be spread far and

591

00:25:57,879 --> 00:25:55,659

wide link will be in the show notes

592

00:26:00,190 --> 00:25:57,889

congratulations to Senator Dino tally

593

00:26:04,680 --> 00:26:00,200

for standing up to the Australian

594

00:26:07,240 --> 00:26:04,690

vaccination Network few parents today

595

00:26:09,759 --> 00:26:07,250

have had the experience of watching a

596

00:26:13,320 --> 00:26:09,769

child with measles develop complications

597

00:26:16,029 --> 00:26:13,330

that become a life-threatening condition

598

00:26:18,879 --> 00:26:16,039

we're spared the horror of watching a

599

00:26:21,930 --> 00:26:18,889

child with whooping cough turned blue

600

00:26:24,399 --> 00:26:21,940

and suffer a seizure from a coughing fit

601
00:26:27,100 --> 00:26:24,409
we're no longer encounter people on a

602
00:26:30,960 --> 00:26:27,110
daily basis whose limbs have been

603
00:26:33,519 --> 00:26:30,970
twisted by paralytic poliomyelitis as

604
00:26:35,860 --> 00:26:33,529
these horrors have faded from daily life

605
00:26:38,529 --> 00:26:35,870
we should be celebrating the life saving

606
00:26:42,450 --> 00:26:38,539
innovation that has saved us and now

607
00:26:45,550 --> 00:26:42,460
kids from death and disease instead

608
00:26:49,050 --> 00:26:45,560
there are people who now question

609
00:26:51,660 --> 00:26:49,060
ennis of vaccine itself the avian

610
00:26:54,430 --> 00:26:51,670
Australian vaccination Network

611
00:26:56,650 --> 00:26:54,440
misleadingly named founded in nineteen

612
00:27:00,190 --> 00:26:56,660
ninety-four have styled themselves as

613
00:27:03,010 --> 00:27:00,200

providers of vaccine information in fact

614

00:27:06,850 --> 00:27:03,020

their mission is to deter patients from

615

00:27:09,070 --> 00:27:06,860

getting their children vaccinated they

616

00:27:10,840 --> 00:27:09,080

accomplished their mission by sowing

617

00:27:12,940 --> 00:27:10,850

fear and doubt in the minds of parents

618

00:27:16,660 --> 00:27:12,950

who of young kids and dressing it up in

619

00:27:18,670 --> 00:27:16,670

the language of science they pretend to

620

00:27:21,100 --> 00:27:18,680

be mutual providers of information to

621

00:27:24,630 --> 00:27:21,110

allow parents to make a choice but in

622

00:27:27,160 --> 00:27:24,640

reality they are fiercely anti-vaccine

623

00:27:28,990 --> 00:27:27,170

the claims made by the avian and

624

00:27:32,830 --> 00:27:29,000

particularly by their founder miss

625

00:27:34,720 --> 00:27:32,840

Merrill Dori beggar belief despite being

626

00:27:36,670 --> 00:27:34,730

corrected numerous times by health

627

00:27:39,010 --> 00:27:36,680

professional scientists and so on they

628

00:27:43,030 --> 00:27:39,020

continue to propagating outright myths

629

00:27:45,880 --> 00:27:43,040

about vaccines and their safety they say

630

00:27:47,950 --> 00:27:45,890

that the mmm MMR vaccine causes autism a

631

00:27:51,460 --> 00:27:47,960

claim they know that has been thoroughly

632

00:27:53,410 --> 00:27:51,470

and comprehensively debunked they claim

633

00:27:56,290 --> 00:27:53,420

links between vaccines and sudden infant

634

00:27:58,440 --> 00:27:56,300

death syndrome they claim HPV does not

635

00:28:00,700 --> 00:27:58,450

cause cancer but that vaccines do

636

00:28:03,070 --> 00:28:00,710

they're on the record claiming that

637

00:28:06,670 --> 00:28:03,080

pertussis or whooping cough is not safe

638

00:28:09,490 --> 00:28:06,680

and has not been tested the list goes on

639

00:28:13,030 --> 00:28:09,500

as well as making false claims about

640

00:28:15,310 --> 00:28:13,040

vaccines miss story and the avian make

641

00:28:17,920 --> 00:28:15,320

even more looted ludicrous claims about

642

00:28:20,140 --> 00:28:17,930

the diseases they were designed to

643

00:28:22,270 --> 00:28:20,150

prevent they dispute the harms of

644

00:28:25,840 --> 00:28:22,280

dangerous childhood diseases in order to

645

00:28:28,150 --> 00:28:25,850

downplay the benefits of a vaccine one

646

00:28:30,550 --> 00:28:28,160

especially preposterous example of this

647

00:28:33,790 --> 00:28:30,560

claim is that measles is beneficial to

648

00:28:36,760 --> 00:28:33,800

children making them more robust than

649

00:28:38,800 --> 00:28:36,770

leading to growth spurts a Miss story

650

00:28:42,190 --> 00:28:38,810

has claimed that the word measles in

651
00:28:45,160 --> 00:28:42,200
Sanskrit means gift from a goddess and

652
00:28:47,500 --> 00:28:45,170
has publicized a book called Melanie's

653
00:28:49,570 --> 00:28:47,510
marvelous measles the downplays the

654
00:28:52,240 --> 00:28:49,580
dangers of this disease well mr.

655
00:28:54,610 --> 00:28:52,250
president as a doctor I can inform the

656
00:28:57,220 --> 00:28:54,620
Senate that measles isn't a magical gift

657
00:28:59,150 --> 00:28:57,230
from mother nature it's a virus that

658
00:29:01,250 --> 00:28:59,160
damages the human body

659
00:29:05,390 --> 00:29:01,260
and has the potential for serious and

660
00:29:07,580 --> 00:29:05,400
sometimes fatal complications in 2001

661
00:29:09,380 --> 00:29:07,590
the World Health Organization estimated

662
00:29:13,220 --> 00:29:09,390
a hundred and fifty-eight thousand

663
00:29:15,200 --> 00:29:13,230

deaths from this disease it's one of the

664

00:29:17,930 --> 00:29:15,210

leading causes of preventable disease

665

00:29:20,330 --> 00:29:17,940

worldwide and to suggest that a parent

666

00:29:23,150 --> 00:29:20,340

should deliberately expose their child

667

00:29:27,170 --> 00:29:23,160

to this disease is reckless it's

668

00:29:29,360 --> 00:29:27,180

dangerous and it can be fatal when

669

00:29:32,420 --> 00:29:29,370

concerned citizens seek to shine a light

670

00:29:34,790 --> 00:29:32,430

on the absurd beliefs of the avn their

671

00:29:37,460 --> 00:29:34,800

reactions are telling doctors are called

672

00:29:41,090 --> 00:29:37,470

killers and terrorists and vaccinations

673

00:29:42,650 --> 00:29:41,100

linked or likened to rape by the avn to

674

00:29:44,900 --> 00:29:42,660

silence critics they take out

675

00:29:47,510 --> 00:29:44,910

apprehended violent apprehended violence

676
00:29:49,610 --> 00:29:47,520
orders and when tragedies have occurred

677
00:29:51,980 --> 00:29:49,620
that put lie to their nonsensical claims

678
00:29:54,800 --> 00:29:51,990
they've gone so far as to harass

679
00:29:57,650 --> 00:29:54,810
grieving parents miss story is alleged

680
00:29:59,720 --> 00:29:57,660
to have called Chris coca guy whose

681
00:30:01,310 --> 00:29:59,730
child died of chickenpox and said that

682
00:30:04,640 --> 00:30:01,320
his child died because his child was

683
00:30:06,560 --> 00:30:04,650
weak in 2009 Danny McCaffrey the

684
00:30:08,690 --> 00:30:06,570
daughter of david and Tony McCaffrey

685
00:30:11,750 --> 00:30:08,700
tragically died from the whooping cough

686
00:30:14,090 --> 00:30:11,760
infection and incredibly in response to

687
00:30:16,160 --> 00:30:14,100
this tragedy miss Dorry went as far as

688
00:30:18,350 --> 00:30:16,170

to contact the New South Wales Director

689

00:30:20,030 --> 00:30:18,360

of Public Health to dispute the cause of

690

00:30:23,240 --> 00:30:20,040

death and ask for confidential medical

691

00:30:24,680 --> 00:30:23,250

information when the story became public

692

00:30:27,260 --> 00:30:24,690

they had to into your months of

693

00:30:29,720 --> 00:30:27,270

harassment from the avian and had to

694

00:30:31,580 --> 00:30:29,730

wind your watching dorigo on TV denial

695

00:30:33,800 --> 00:30:31,590

denying a child who died of whooping

696

00:30:37,040 --> 00:30:33,810

cough and accusing them of turning dana

697

00:30:39,560 --> 00:30:37,050

into a martyr but fortunately there are

698

00:30:41,630 --> 00:30:39,570

people in the community fighting against

699

00:30:44,660 --> 00:30:41,640

the harmful and bullying tactics of the

700

00:30:47,720 --> 00:30:44,670

avian in response to this disgraceful

701
00:30:50,090 --> 00:30:47,730
harassment of the McCaffrey's the group

702
00:30:52,100 --> 00:30:50,100
stopped the avian was formed with the

703
00:30:54,050 --> 00:30:52,110
purpose of combat combating the

704
00:30:56,750 --> 00:30:54,060
dangerous campaign and I'm grateful to

705
00:30:59,540 --> 00:30:56,760
people like Daniel Raphael Peter

706
00:31:01,820 --> 00:30:59,550
Bowditch Ken MacLeod and others who have

707
00:31:04,880 --> 00:31:01,830
endured the harassment of miss Dorry and

708
00:31:07,100 --> 00:31:04,890
her followers but they do it in order to

709
00:31:09,230 --> 00:31:07,110
save other parents the unending pain and

710
00:31:12,710 --> 00:31:09,240
heartache that they themselves have had

711
00:31:13,250 --> 00:31:12,720
to endure mr. president Dana McCaffrey

712
00:31:15,710 --> 00:31:13,260
was too

713
00:31:18,680 --> 00:31:15,720

to receive the whooping cough vaccine

714

00:31:20,540 --> 00:31:18,690

she died though because the vaccination

715

00:31:22,190 --> 00:31:20,550

rate in the northern rivers area of New

716

00:31:25,090 --> 00:31:22,200

South Wales where she's born is

717

00:31:28,870 --> 00:31:25,100

alarmingly low at only seventy percent

718

00:31:33,110 --> 00:31:28,880

when you reach a threshold at that level

719

00:31:35,900 --> 00:31:33,120

the conditions for an outbreak occur and

720

00:31:38,030 --> 00:31:35,910

the virus was only able to survive and

721

00:31:41,690 --> 00:31:38,040

thrive in that community because

722

00:31:44,900 --> 00:31:41,700

vaccination rates were so low and it's

723

00:31:46,700 --> 00:31:44,910

this area this very area where the avian

724

00:31:49,430 --> 00:31:46,710

is strongest and where they're based

725

00:31:51,920 --> 00:31:49,440

they are the consequence of an

726

00:31:56,060 --> 00:31:51,930

irresponsible campaign based on fear and

727

00:31:58,190 --> 00:31:56,070

lies unfortunately I don't have time to

728

00:32:00,560 --> 00:31:58,200

complete the catalogue of crimes against

729

00:32:03,260 --> 00:32:00,570

reason and common decency perpetrated by

730

00:32:06,320 --> 00:32:03,270

this group I don't know what motivates

731

00:32:08,750 --> 00:32:06,330

them I imagine that they are sincere but

732

00:32:11,470 --> 00:32:08,760

they are misguided probably due to some

733

00:32:15,830 --> 00:32:11,480

combination of soup superstition

734

00:32:18,470 --> 00:32:15,840

paranoia and scientific illiteracy all

735

00:32:20,480 --> 00:32:18,480

of that can be forgiven but the tactics

736

00:32:22,640 --> 00:32:20,490

they've used to spread their message of

737

00:32:26,750 --> 00:32:22,650

fear and doubt to unsuspecting parents

738

00:32:28,520 --> 00:32:26,760

are apparent it's true that we do enjoy

739

00:32:31,420 --> 00:32:28,530

freedom of speech in this country and

740

00:32:33,950 --> 00:32:31,430

I'm a fierce defender of that freedom

741

00:32:36,740 --> 00:32:33,960

but because of the potential for harm

742

00:32:39,500 --> 00:32:36,750

we've rules about misleading medical

743

00:32:42,860 --> 00:32:39,510

claims we regulate medicines and we

744

00:32:47,200 --> 00:32:42,870

regulate doctors in the case of the

745

00:32:49,610 --> 00:32:47,210

avian that regulation is not working for

746

00:32:51,530 --> 00:32:49,620

instance among the many complaints held

747

00:32:53,900 --> 00:32:51,540

against me story in a group the TGA

748

00:32:56,750 --> 00:32:53,910

ordered her to retract claims about a

749

00:32:58,700 --> 00:32:56,760

dodgy can secure called black salvo but

750

00:33:02,450 --> 00:32:58,710

she's not done that in violation of the

751
00:33:04,790 --> 00:33:02,460
TGA order well-meaning parents in this

752
00:33:06,890 --> 00:33:04,800
country who go in search in good faith

753
00:33:09,020 --> 00:33:06,900
for information on vaccines are

754
00:33:11,660 --> 00:33:09,030
confronted with avian propaganda and

755
00:33:13,280 --> 00:33:11,670
without knowing the background it's

756
00:33:15,730 --> 00:33:13,290
difficult for them to weigh the

757
00:33:17,830 --> 00:33:15,740
credibility of this information in

758
00:33:20,930 --> 00:33:17,840
comparison to the medical literature

759
00:33:24,140 --> 00:33:20,940
it's no wonder some parents are deciding

760
00:33:25,789 --> 00:33:24,150
to delay or forego vaccination but it

761
00:33:28,159 --> 00:33:25,799
could be a fatal decision

762
00:33:30,560 --> 00:33:28,169
and for that reason the avian need to be

763
00:33:32,239 --> 00:33:30,570

held to account I condemn them the

764

00:33:43,700 --> 00:33:32,249

Australian Greens condemn them in the

765

00:33:45,560 --> 00:33:43,710

Australian Senate condemns them the

766

00:33:48,710 --> 00:33:45,570

skeptic magazine the journal from

767

00:33:50,930 --> 00:33:48,720

Australian skeptics subscribe online to

768

00:33:56,239 --> 00:33:50,940

the world's second oldest skeptical

769

00:33:58,999 --> 00:33:56,249

magazine visit w WC apx com au and click

770

00:34:02,960 --> 00:33:59,009

the publication's league you can also

771

00:34:06,289 --> 00:34:02,970

find their over 30 years on back issues

772

00:34:19,359 --> 00:34:06,299

free to download the skeptic magazine

773

00:34:21,820 --> 00:34:19,369

from Australian skeptics here's may not

774

00:34:25,300 --> 00:34:21,830

spooky action

775

00:34:29,480 --> 00:34:27,050

ladies and gentlemen were talking to

776

00:34:31,430 --> 00:34:29,490

someone from the CSIRO we're talking to

777

00:34:33,350 --> 00:34:31,440

jonathan roberts now what is your

778

00:34:37,460 --> 00:34:33,360

relationship with the beautifully named

779

00:34:40,850 --> 00:34:37,470

autonomous research laboratory well i am

780

00:34:44,300 --> 00:34:40,860

the director of the research lab so the

781

00:34:46,520 --> 00:34:44,310

autonomous systems research lab is a lab

782

00:34:50,030 --> 00:34:46,530

up in Brisbane and we do think all

783

00:34:52,670 --> 00:34:50,040

robotic and autonomous system oh and

784

00:34:54,530 --> 00:34:52,680

what did you get your doctorate in oh I

785

00:34:57,950 --> 00:34:54,540

think got my doctorate in computer

786

00:35:00,380 --> 00:34:57,960

vision systems and what I have computed

787

00:35:02,450 --> 00:35:00,390

and what drew you to that and I guess

788

00:35:04,280 --> 00:35:02,460

that that's so they can do they can do

789

00:35:07,220 --> 00:35:04,290

all sorts of things where perception

790

00:35:08,600 --> 00:35:07,230

recognition 3d movement is that what

791

00:35:11,600 --> 00:35:08,610

attracted you to that that particular

792

00:35:14,300 --> 00:35:11,610

field absolutely yes I mean what really

793

00:35:16,070 --> 00:35:14,310

attracted me was being the movie star

794

00:35:18,170 --> 00:35:16,080

was getting all excited as a little

795

00:35:21,560 --> 00:35:18,180

kids and then as I went through

796

00:35:24,200 --> 00:35:21,570

University and for robot sort of vision

797

00:35:26,030 --> 00:35:24,210

was an interesting topic and trying to

798

00:35:27,710 --> 00:35:26,040

understand how you get a robot to see

799

00:35:30,080 --> 00:35:27,720

the world or the great research

800

00:35:31,960 --> 00:35:30,090

challenge and what still is the greatest

801
00:35:34,370 --> 00:35:31,970
challenge when it comes to a machine

802
00:35:37,070 --> 00:35:34,380
seeing the real world and working out

803
00:35:40,820 --> 00:35:37,080
what it is I think it's really this idea

804
00:35:43,580 --> 00:35:40,830
of perception of how you take camera

805
00:35:46,430 --> 00:35:43,590
images or images created by other

806
00:35:48,950 --> 00:35:46,440
devices like language and how you endow

807
00:35:51,770 --> 00:35:48,960
the Machine interpret water theme that

808
00:35:54,290 --> 00:35:51,780
is a real old problem we've we've got a

809
00:35:57,050 --> 00:35:54,300
few solutions to a few of a few things

810
00:36:00,350 --> 00:35:57,060
what area but not not that anything that

811
00:36:02,180 --> 00:36:00,360
could compete with a human in the area

812
00:36:03,350 --> 00:36:02,190
that you work in with the laser mapping

813
00:36:05,540 --> 00:36:03,360

that we're going to talk about in the

814

00:36:07,880 --> 00:36:05,550

moment and and with all robot and

815

00:36:10,160 --> 00:36:07,890

machine work is it very difficult to

816

00:36:12,440 --> 00:36:10,170

compete with love the powerhouses of yo

817

00:36:14,420 --> 00:36:12,450

California in the US and China and the

818

00:36:18,050 --> 00:36:14,430

UK how do we how do we fit up against

819

00:36:20,150 --> 00:36:18,060

them oh very well actually uh we we

820

00:36:22,220 --> 00:36:20,160

compete by getting people from woven

821

00:36:24,890 --> 00:36:22,230

world of course we don't have many

822

00:36:26,740 --> 00:36:24,900

people in Australia as other powerhouses

823

00:36:29,870 --> 00:36:26,750

but we can make up for that by

824

00:36:33,170 --> 00:36:29,880

attracting people here my laboratory has

825

00:36:36,080 --> 00:36:33,180

about 50 research stuff and probably 30

826

00:36:38,180 --> 00:36:36,090

of them come from around the world and

827

00:36:38,779 --> 00:36:38,190

we get the best and brightest bring them

828

00:36:40,159 --> 00:36:38,789

here

829

00:36:42,049 --> 00:36:40,169

of course they become Australian

830

00:36:44,599 --> 00:36:42,059

eventually because I love it so much and

831

00:36:46,819 --> 00:36:44,609

that's how we can compete and and what

832

00:36:48,019 --> 00:36:46,829

actually do the scientists like as most

833

00:36:49,669 --> 00:36:48,029

about this country is it something about

834

00:36:51,919 --> 00:36:49,679

the lifestyle they like going for a swim

835

00:36:54,679 --> 00:36:51,929

it's it's easy we tell better jokes what

836

00:36:56,269 --> 00:36:54,689

do they like about the country oh yeah

837

00:36:58,459 --> 00:36:56,279

the people we have here I mean they all

838

00:37:00,919 --> 00:36:58,469

love it very few of them ever go back to

839

00:37:02,870 --> 00:37:00,929

where I came from they love all of them

840

00:37:04,579 --> 00:37:02,880

so that they love is that I think I love

841

00:37:07,729 --> 00:37:04,589

the environment ramya they love the

842

00:37:09,529 --> 00:37:07,739

positivity it's it's a great place to do

843

00:37:11,359 --> 00:37:09,539

research and food technology work

844

00:37:13,699 --> 00:37:11,369

because people are so call design

845

00:37:16,579 --> 00:37:13,709

actually wants a doc new mitogenic thing

846

00:37:18,409 --> 00:37:16,589

what look now I have to ask you before

847

00:37:20,509 --> 00:37:18,419

we get on to the main product zebedee

848

00:37:22,309 --> 00:37:20,519

whereas i think is fantastic what is

849

00:37:24,349 --> 00:37:22,319

your what do you thinks the best example

850

00:37:25,489 --> 00:37:24,359

of computers in science fiction movie

851
00:37:27,140 --> 00:37:25,499
what's the one where you look at it and

852
00:37:29,839 --> 00:37:27,150
go well that's kind of getting towards

853
00:37:33,439 --> 00:37:29,849
what we could or might do well my

854
00:37:35,989 --> 00:37:33,449
favorite robot is the IND r2d2 from Star

855
00:37:37,549 --> 00:37:35,999
warranties cover my arrow a lot of

856
00:37:39,679 --> 00:37:37,559
people don't realize but those Star Wars

857
00:37:42,829 --> 00:37:39,689
movies really if they revolve around

858
00:37:44,959 --> 00:37:42,839
around our PVC it's all about him and

859
00:37:46,549 --> 00:37:44,969
he's kind of this great little robot

860
00:37:48,739 --> 00:37:46,559
that can do everything and what's the

861
00:37:50,479 --> 00:37:48,749
favor galaxy it definitely the one well

862
00:37:52,429 --> 00:37:50,489
I thought you might have gone from of a

863
00:37:54,169 --> 00:37:52,439

blade run a replicant kind of thing you

864

00:37:56,089 --> 00:37:54,179

know with the very advanced robot the

865

00:37:59,149 --> 00:37:56,099

can't be taught to top apart from a

866

00:38:01,219 --> 00:37:59,159

human they're been scary yeah yeah and

867

00:38:02,870 --> 00:38:01,229

do you think that is as we if you try

868

00:38:04,549 --> 00:38:02,880

and make a robot a bit too much like a

869

00:38:06,709 --> 00:38:04,559

human and you don't quite get it right

870

00:38:08,359 --> 00:38:06,719

it looks a bit eerie doesn't it it does

871

00:38:10,669 --> 00:38:08,369

and there's an official term for that

872

00:38:12,589 --> 00:38:10,679

it's called the uncanny valley which is

873

00:38:14,809 --> 00:38:12,599

this this idea that when you get a

874

00:38:16,640 --> 00:38:14,819

little bit you know if something's

875

00:38:18,529 --> 00:38:16,650

perfect it's okay and if something's

876

00:38:20,209 --> 00:38:18,539

really different it's okay but if it's

877

00:38:22,370 --> 00:38:20,219

been that between between stay where

878

00:38:24,709 --> 00:38:22,380

it's getting a bit realistic but it's

879

00:38:26,479 --> 00:38:24,719

just um camera it's not quite right yeah

880

00:38:28,399 --> 00:38:26,489

I've heard this they have this effect

881

00:38:30,169 --> 00:38:28,409

with video games and video games are

882

00:38:32,329 --> 00:38:30,179

almost looking to reel you get the

883

00:38:34,099 --> 00:38:32,339

uncanny valley effect where it's almost

884

00:38:35,599 --> 00:38:34,109

a put off because the Bloods looking to

885

00:38:37,130 --> 00:38:35,609

reel is like you really are shooting

886

00:38:39,019 --> 00:38:37,140

someone yeah that's right exactly right

887

00:38:40,849 --> 00:38:39,029

it's the same with robots so you have to

888

00:38:43,159 --> 00:38:40,859

have to think about that stuff with you

889

00:38:45,109 --> 00:38:43,169

when you make a design robot well what

890

00:38:46,999 --> 00:38:45,119

you've been making and designing at the

891

00:38:50,390 --> 00:38:47,009

research laboratory there for the CSIRO

892

00:38:52,429 --> 00:38:50,400

is a laser 3d mapping equipment called

893

00:38:52,640 --> 00:38:52,439

Zebedee explain it to us and what sort

894

00:38:54,799 --> 00:38:52,650

of you

895

00:38:57,380 --> 00:38:54,809

users would have yes so this equipment

896

00:38:59,029 --> 00:38:57,390

was originally built for robots so that

897

00:39:01,579 --> 00:38:59,039

as I move around the environment they

898

00:39:03,620 --> 00:39:01,589

can app the world and our researchers

899

00:39:07,549 --> 00:39:03,630

realize that humans could also use it

900

00:39:11,510 --> 00:39:07,559

though it did the system that can be

901
00:39:12,950 --> 00:39:11,520
used to as you walk around you wave sort

902
00:39:15,109 --> 00:39:12,960
of it's like a magic wok that has a

903
00:39:17,960 --> 00:39:15,119
laser scanner on the end of a little

904
00:39:20,029 --> 00:39:17,970
handle it's on the end of the spring and

905
00:39:22,069 --> 00:39:20,039
you walk around an environment you could

906
00:39:23,990 --> 00:39:22,079
walk around buildings or a forest point

907
00:39:26,779 --> 00:39:24,000
anywhere you want the map and it

908
00:39:29,019 --> 00:39:26,789
actually acts the whole world in quite a

909
00:39:31,250 --> 00:39:29,029
lot of detail sort of about a centimeter

910
00:39:33,529 --> 00:39:31,260
level of detail and in that bit of

911
00:39:36,950 --> 00:39:33,539
started you can walk around so you can

912
00:39:38,269 --> 00:39:36,960
go and map a historic sites which are

913
00:39:40,910 --> 00:39:38,279

we've done a number of those or you

914

00:39:42,859 --> 00:39:40,920

could map cave we've mapped you know and

915

00:39:44,630 --> 00:39:42,869

came from the Blue Mountain you can

916

00:39:48,049 --> 00:39:44,640

check that all the mapping information

917

00:39:51,289 --> 00:39:48,059

do it will then because it's very fast

918

00:39:53,420 --> 00:39:51,299

moving to you and then you can load that

919

00:39:56,359 --> 00:39:53,430

into you know whatever computer

920

00:39:59,029 --> 00:39:56,369

modelling package you might use to

921

00:40:00,620 --> 00:39:59,039

actually do your work and what's the

922

00:40:02,299 --> 00:40:00,630

range of it because obviously a laser

923

00:40:04,579 --> 00:40:02,309

can potentially go on infinitely

924

00:40:06,140 --> 00:40:04,589

depending on how its weaknesses how high

925

00:40:08,180 --> 00:40:06,150

can you map if you're in a very tall

926
00:40:10,309 --> 00:40:08,190
room or outdoors I've seen it being used

927
00:40:12,589 --> 00:40:10,319
in the bush that's right so there later

928
00:40:17,019 --> 00:40:12,599
they typically work ones were you what's

929
00:40:20,359 --> 00:40:17,029
about 20 meters and really there is

930
00:40:24,410 --> 00:40:20,369
keeping related nice and low power over

931
00:40:26,000 --> 00:40:24,420
it completely I safe yes what's the

932
00:40:27,140 --> 00:40:26,010
limit of the power of the laser you can

933
00:40:29,450 --> 00:40:27,150
have on something that's just waving

934
00:40:31,700 --> 00:40:29,460
around at an angle in public and that

935
00:40:32,990 --> 00:40:31,710
you can probably is from the it decay

936
00:40:34,370 --> 00:40:33,000
all depends of course on the amount of

937
00:40:37,250 --> 00:40:34,380
energy coming out the laser but we

938
00:40:38,990 --> 00:40:37,260

typically see lasers that will work up

939

00:40:42,289 --> 00:40:39,000

to a couple of hundred meters that are

940

00:40:44,180 --> 00:40:42,299

so-called I safe but those ones that are

941

00:40:46,370 --> 00:40:44,190

much have those great arranger tend to

942

00:40:49,250 --> 00:40:46,380

be fought yet larger bigger and bulkier

943

00:40:51,170 --> 00:40:49,260

so the small ones for hand they all go

944

00:40:52,880 --> 00:40:51,180

to about 20 meters the first thing I

945

00:40:55,130 --> 00:40:52,890

thought when I saw this and you have to

946

00:40:58,190 --> 00:40:55,140

tell us a lot about meez I thought dance

947

00:41:00,349 --> 00:40:58,200

parties if everybody at a dance party

948

00:41:02,329 --> 00:41:00,359

had one of these in a blackened room

949

00:41:06,380 --> 00:41:02,339

with a smoke machine going it would be

950

00:41:07,519 --> 00:41:06,390

awesome yes I can defeat and

951
00:41:08,660 --> 00:41:07,529
come on I mean you must have some good

952
00:41:11,089 --> 00:41:08,670
Christmas parties where you let the

953
00:41:12,799 --> 00:41:11,099
lasers go in the lab come on well then

954
00:41:14,990 --> 00:41:12,809
they're actually not visible so these

955
00:41:17,660 --> 00:41:15,000
losers are all they're all near infrared

956
00:41:19,849 --> 00:41:17,670
if we can't quite see them our eyesight

957
00:41:21,589 --> 00:41:19,859
aren't quite seeing that frequently and

958
00:41:23,180 --> 00:41:21,599
this is where mining would come in handy

959
00:41:24,410 --> 00:41:23,190
to you could do it as often as you like

960
00:41:28,130 --> 00:41:24,420
and you can tell if there's been is

961
00:41:30,289 --> 00:41:28,140
shift in the earth exactly right and is

962
00:41:33,200 --> 00:41:30,299
a probable youth in underground mining

963
00:41:35,569 --> 00:41:33,210

as an issue called tunnel convergence

964

00:41:37,819 --> 00:41:35,579

where tunnels of court would be they

965

00:41:39,740 --> 00:41:37,829

often shrinks and get narrower over time

966

00:41:42,500 --> 00:41:39,750

and that we are the weight of the earth

967

00:41:46,519 --> 00:41:42,510

of government loosen and core final life

968

00:41:48,230 --> 00:41:46,529

monitor that there is going and I must

969

00:41:49,970 --> 00:41:48,240

explain people how it's used again you

970

00:41:52,099 --> 00:41:49,980

walk along you hold it at about chest

971

00:41:54,680 --> 00:41:52,109

height it's on a spring so the walking

972

00:41:56,720 --> 00:41:54,690

motion starts moving a laser around and

973

00:41:57,829 --> 00:41:56,730

that's how it does its mapping and what

974

00:42:00,170 --> 00:41:57,839

country do you think would like it

975

00:42:01,460 --> 00:42:00,180

obviously mining in Australia who has

976
00:42:02,630 --> 00:42:01,470
the money when it comes to this kind of

977
00:42:04,039 --> 00:42:02,640
thing who do you normally pitch to

978
00:42:06,200 --> 00:42:04,049
everyone would think of automatically

979
00:42:09,200 --> 00:42:06,210
Americans or Chinese but is there some

980
00:42:11,539 --> 00:42:09,210
other market we forget about well it's I

981
00:42:13,249 --> 00:42:11,549
I think I think this will have roiled

982
00:42:15,470 --> 00:42:13,259
wide appeal it's currently been

983
00:42:18,940 --> 00:42:15,480
commercialized by a company based in the

984
00:42:21,650 --> 00:42:18,950
UK who of course sell it internationally

985
00:42:24,230 --> 00:42:21,660
and but I think I really think this will

986
00:42:26,390 --> 00:42:24,240
be a worldwide productive it can be used

987
00:42:27,650 --> 00:42:26,400
to map I don't anything and jonathan

988
00:42:28,910 --> 00:42:27,660

roberts is someone who knows the

989

00:42:31,819 --> 00:42:28,920

industry and the technology industry

990

00:42:32,839 --> 00:42:31,829

someone might be about to go into union

991

00:42:34,460 --> 00:42:32,849

they're not quite sure that when they

992

00:42:36,019 --> 00:42:34,470

might do chemistry they might do physics

993

00:42:38,809 --> 00:42:36,029

what would you recommend they get into

994

00:42:41,329 --> 00:42:38,819

for the future boom area of australian

995

00:42:43,150 --> 00:42:41,339

technology so in this hot this whole

996

00:42:45,529 --> 00:42:43,160

area of robotics is actually quite

997

00:42:48,079 --> 00:42:45,539

multi-disciplinary which is very good so

998

00:42:50,839 --> 00:42:48,089

we have people working who are

999

00:42:53,120 --> 00:42:50,849

mathematicians the electrical engineers

1000

00:42:55,309 --> 00:42:53,130

Mechanical Engineering we have physicist

1001
00:42:57,740 --> 00:42:55,319
myself i'm actually an aerospace

1002
00:43:00,019 --> 00:42:57,750
engineer / either the university my

1003
00:43:02,180 --> 00:43:00,029
first degree and there's a new breed of

1004
00:43:05,140 --> 00:43:02,190
engineers called mechatronic engineers

1005
00:43:07,609 --> 00:43:05,150
as a number of universes sorry narrative

1006
00:43:10,819 --> 00:43:07,619
mechatronic as a ninja going to bring up

1007
00:43:13,249 --> 00:43:10,829
confusion between mechanical electrical

1008
00:43:17,029 --> 00:43:13,259
and electronic engineering so kind of

1009
00:43:20,270 --> 00:43:17,039
that whole broad range of engineering i

1010
00:43:21,560 --> 00:43:20,280
think would be great thing

1011
00:43:23,630 --> 00:43:21,570
thank you very much for your time today

1012
00:43:24,890 --> 00:43:23,640
and as an Aeronautics engineer again we

1013
00:43:26,540 --> 00:43:24,900

can get inside what's your favorite

1014

00:43:28,610 --> 00:43:26,550

plane ever I'm a bit of a fan of the

1015

00:43:30,410 --> 00:43:28,620

adore Obama the first-ever jet bomber

1016

00:43:32,360 --> 00:43:30,420

the Germans made I liked it it was back

1017

00:43:33,650 --> 00:43:32,370

bit weird what's your favorite aeroplane

1018

00:43:36,500 --> 00:43:33,660

ever as someone who knows about

1019

00:43:38,870 --> 00:43:36,510

aeronautics back the Maquis tags from

1020

00:43:43,310 --> 00:43:38,880

Iowa what was that purely because it was

1021

00:43:44,810 --> 00:43:43,320

made of wood yes that's like exactly oh

1022

00:43:45,890 --> 00:43:44,820

boy yeah well you just wouldn't think

1023

00:43:48,860 --> 00:43:45,900

okay let's make something groundbreaking

1024

00:43:50,870 --> 00:43:48,870

I let you some wood for it you clearly

1025

00:43:52,640 --> 00:43:50,880

know your aircraft on correct oh I just

1026
00:43:54,230 --> 00:43:52,650
slept too late watching people fight

1027
00:43:56,870 --> 00:43:54,240
Germans on television you should intend

1028
00:43:58,610 --> 00:43:56,880
to pick up this sort of knowledge look

1029
00:44:00,020 --> 00:43:58,620
Jonathan Roberts thanks for trying to us

1030
00:44:01,430 --> 00:44:00,030
and where can people what website can

1031
00:44:03,470 --> 00:44:01,440
people go to to find out more about

1032
00:44:05,330 --> 00:44:03,480
Zebedee in this 3d mapping system and

1033
00:44:07,670 --> 00:44:05,340
what you get up to it the autonomous

1034
00:44:10,700 --> 00:44:07,680
research laboratory I love that name so

1035
00:44:15,170 --> 00:44:10,710
if you just go to zero dot a you we have

1036
00:44:17,690 --> 00:44:15,180
a very simple website address / ASL on

1037
00:44:20,870 --> 00:44:17,700
the AFL fence the autonomous systems lab

1038
00:44:22,400 --> 00:44:20,880

so there's our over a new / AFL and

1039

00:44:24,770 --> 00:44:22,410

you're found or thoughtful well

1040

00:44:26,090 --> 00:44:24,780

interesting research well thank you for

1041

00:44:27,980 --> 00:44:26,100

talking to us from the autonomous

1042

00:44:42,329 --> 00:44:27,990

systems lab today jonathan roberts

1043

00:44:42,339 --> 00:44:50,490

in a world where the truth is a matter

1044

00:44:58,390 --> 00:44:53,550

we're messages are a scene for beyond

1045

00:45:04,460 --> 00:45:01,750

and reason is sidelined for magical

1046

00:45:13,370 --> 00:45:06,800

oh please read them stand between the

1047

00:45:14,930 --> 00:45:13,380

truth what date is it 78 several thing

1048

00:45:16,310 --> 00:45:14,940

this is impressive it's beating our

1049

00:45:18,370 --> 00:45:16,320

system present they're not their

1050

00:45:21,349 --> 00:45:18,380

photographs of Chinese anthem it's not

1051

00:45:23,180 --> 00:45:21,359

we are not well received is a good guard

1052

00:45:25,190 --> 00:45:23,190

we're fully don't discuss cryptozoology

1053

00:45:27,140 --> 00:45:25,200

on the show very often because we don't

1054

00:45:29,000 --> 00:45:27,150

know anything about how the truth the

1055

00:45:30,710 --> 00:45:29,010

price gets lower and lower and lower and

1056

00:45:35,300 --> 00:45:30,720

then he hits the ceiling it's just even

1057

00:45:37,130 --> 00:45:35,310

for the rumba more skeptic to the K for

1058

00:45:51,280 --> 00:45:37,140

the Most High skeptics society find us

1059

00:45:57,110 --> 00:45:53,840

thank you for listening to the skeptic

1060

00:45:59,600 --> 00:45:57,120

zone well it's time for me to get the

1061

00:46:00,860 --> 00:45:59,610

suitcase out of the cupboard it hasn't

1062

00:46:02,660 --> 00:46:00,870

been in there for long get the suitcase

1063

00:46:04,880 --> 00:46:02,670

out of the cupboard start packing my

1064

00:46:06,710 --> 00:46:04,890

bits and pieces for my trip to

1065

00:46:09,260 --> 00:46:06,720

California or I'll be spending a few

1066

00:46:12,500 --> 00:46:09,270

days in the Bay Area then after that on

1067

00:46:14,090 --> 00:46:12,510

to the amazing meeting in Las Vegas one

1068

00:46:16,640 --> 00:46:14,100

of the highlights of my year to be sure

1069

00:46:18,470 --> 00:46:16,650

and I do look forward to catching up

1070

00:46:20,840 --> 00:46:18,480

with lots of friends I only get to see

1071

00:46:24,260 --> 00:46:20,850

once or twice a year if I'm lucky that's

1072

00:46:26,300 --> 00:46:24,270

a I think apart from the wonderful talks

1073

00:46:29,270 --> 00:46:26,310

i'll be attending and hearing and the

1074

00:46:31,550 --> 00:46:29,280

events i think catching up with good and

1075

00:46:34,730 --> 00:46:31,560

dear friends is one of the highlights of

1076

00:46:37,010 --> 00:46:34,740

the amazing meeting for me so next

1077

00:46:39,950 --> 00:46:37,020

week's program will be coming to you

1078

00:46:42,140 --> 00:46:39,960

from the bay area in in california I

1079

00:46:44,420 --> 00:46:42,150

wonder what interesting things I can

1080

00:46:47,350 --> 00:46:44,430

discover there well I hope to be

1081

00:46:49,880 --> 00:46:47,360

catching up with our dear friend dr.

1082

00:46:53,360 --> 00:46:49,890

Eugenie Scott from the National Center

1083

00:46:55,760 --> 00:46:53,370

science education in Oakland always

1084

00:46:58,070 --> 00:46:55,770

worth a visit so until next week this is

1085

00:47:03,950 --> 00:46:58,080

Richard Saunders signing off from Sydney

1086

00:47:05,680 --> 00:47:03,960

Australia you've been listening to the

1087

00:47:10,480 --> 00:47:05,690

skeptics are

1088

00:47:13,540 --> 00:47:10,490

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