



Show 54
30.Oct.2009

www.skepticzone.tv

1
00:00:04,940 --> 00:00:02,480
hi this is JC Hutchins author of the new

2
00:00:07,190 --> 00:00:04,950
thriller novel 7 son descent in

3
00:00:09,919 --> 00:00:07,200
bookstores right now and you're

4
00:00:32,520 --> 00:00:09,929
listening to Australia's finest skeptic

5
00:00:38,700 --> 00:00:35,290
hello and welcome to the skeptic zone

6
00:00:42,070 --> 00:00:38,710
show number 54 for the 30th of oktober

7
00:00:44,770 --> 00:00:42,080
2009 Richard Saunders here with you from

8
00:00:46,990 --> 00:00:44,780
Sydney Australia on this week's show we

9
00:00:50,410 --> 00:00:47,000
have a panel recording from dragoncon

10
00:00:52,510 --> 00:00:50,420
dragon con 2009 with our good friend

11
00:00:54,250 --> 00:00:52,520
kylie Sturgis Martin bridge stock doctor

12
00:00:56,070 --> 00:00:54,260
Eugenie Scott and a host of other

13
00:00:58,750 --> 00:00:56,080

skeptics and they're talking about

14

00:01:01,810 --> 00:00:58,760

creationism and intelligent design and

15

00:01:04,120 --> 00:01:01,820

that sort of thing and after that we

16

00:01:07,719 --> 00:01:04,130

have an interview with the young New

17

00:01:10,469 --> 00:01:07,729

South Wales scientist of the year Iran

18

00:01:13,150 --> 00:01:10,479

segev our reporter in his capacity of

19

00:01:15,310 --> 00:01:13,160

president of Australian skeptics here in

20

00:01:18,190 --> 00:01:15,320

New South Wales went along to the young

21

00:01:21,370 --> 00:01:18,200

scientist of the Year award and recorded

22

00:01:23,859 --> 00:01:21,380

an interview after that our relatively

23

00:01:25,650 --> 00:01:23,869

new segment from Kylie Sturgis the token

24

00:01:29,980 --> 00:01:25,660

skeptic keeping you up to date on

25

00:01:33,640 --> 00:01:29,990

skeptical events upcoming and to wrap up

26

00:01:36,550 --> 00:01:33,650

the show we have a few little snippets

27

00:01:39,040 --> 00:01:36,560

out of the radio show dr. ray tea and I

28

00:01:41,800 --> 00:01:39,050

did here in Sydney on radio 2 GB with

29

00:01:44,710 --> 00:01:41,810

our good friend Glenn wheeler now if you

30

00:01:48,630 --> 00:01:44,720

want to hear the full radio appearance

31

00:01:52,540 --> 00:01:48,640

by dr. HC and myself on 2 GB head for ww

32

00:01:55,300 --> 00:01:52,550

skeptics on TV and we'll put that link

33

00:01:57,430 --> 00:01:55,310

in there for you while you're there you

34

00:02:00,190 --> 00:01:57,440

can check out a video i've posted of me

35

00:02:03,850 --> 00:02:00,200

and Stefan recording the intro and the

36

00:02:05,560 --> 00:02:03,860

outro for the last show so without any

37

00:02:16,830 --> 00:02:05,570

more ado let's get on with this week's

38

00:02:23,110 --> 00:02:21,190

I'm Carly Sturgis and what follows is a

39

00:02:24,759 --> 00:02:23,120

recording of a panel discussion from the

40

00:02:27,970 --> 00:02:24,769

science track at Dragon Con this year

41

00:02:30,670 --> 00:02:27,980

called Darwin's Bulldogs teachers on the

42

00:02:33,100 --> 00:02:30,680

front lines this panel was proposed by

43

00:02:34,930 --> 00:02:33,110

the moderator Matt Lowry who is a high

44

00:02:37,229 --> 00:02:34,940

school physics teacher and a plant-type

45

00:02:40,750 --> 00:02:37,239

physics and astronomy college professor

46

00:02:42,910 --> 00:02:40,760

joining him was myself Carly Sturgis see

47

00:02:45,009 --> 00:02:42,920

Kevin Barrett a writer and biological

48

00:02:47,020 --> 00:02:45,019

anthropologist Martin good stock of

49

00:02:48,789 --> 00:02:47,030

Griffith University and author of the

50

00:02:51,000 --> 00:02:48,799

forthcoming book beyond belief

51
00:02:53,830 --> 00:02:51,010
skepticism science and the paranormal

52
00:02:55,629 --> 00:02:53,840
Barbra Drescher a cognitive psychologist

53
00:02:57,940 --> 00:02:55,639
and lecturer a california state

54
00:03:00,699 --> 00:02:57,950
university northridge and our guest of

55
00:03:03,160 --> 00:03:00,709
honor dr. Eugenie Scott of the National

56
00:03:04,809 --> 00:03:03,170
Center for Science Education you'll be

57
00:03:07,059 --> 00:03:04,819
hearing us discuss our experiences with

58
00:03:09,039 --> 00:03:07,069
creationists and how to effectively

59
00:03:11,259 --> 00:03:09,049
counter their pseudo-scientific nonsense

60
00:03:17,530 --> 00:03:11,269
whilst also promoting good science

61
00:03:19,449 --> 00:03:17,540
education as moderator I just want to

62
00:03:20,650 --> 00:03:19,459
I've got a little list of questions are

63
00:03:21,939 --> 00:03:20,660

made with you just kind of take them in

64

00:03:24,849 --> 00:03:21,949

turn but we can also be sort of

65

00:03:27,250 --> 00:03:24,859

free-flowing and what not here much of

66

00:03:30,550 --> 00:03:27,260

the time I think we've all experienced

67

00:03:32,409 --> 00:03:30,560

that the the whole question and this is

68

00:03:36,189 --> 00:03:32,419

kind of a biggie to start with so many

69

00:03:38,229 --> 00:03:36,199

we can chew on us for a little bit the

70

00:03:41,439 --> 00:03:38,239

whole question of creationism evolution

71

00:03:44,710 --> 00:03:41,449

so on you'll hear it framed by at least

72

00:03:46,330 --> 00:03:44,720

creationists in the United States and on

73

00:03:50,140 --> 00:03:46,340

about other countries but you'll hear

74

00:03:53,530 --> 00:03:50,150

framed as as you know evolution is

75

00:03:55,479 --> 00:03:53,540

anti-god and which is anti religion and

76
00:03:57,819 --> 00:03:55,489
and and and you know you'll sometimes

77
00:03:59,319 --> 00:03:57,829
get people sort of on the other side to

78
00:04:00,759 --> 00:03:59,329
that also like maybe Richard Dawkins and

79
00:04:04,059 --> 00:04:00,769
also kind of 10 a look at it in that

80
00:04:09,159 --> 00:04:04,069
sense but you know on the probe science

81
00:04:13,210 --> 00:04:09,169
site so especially in a country that is

82
00:04:15,340 --> 00:04:13,220
as religious as the United States

83
00:04:17,560 --> 00:04:15,350
this for some people is kind of a

84
00:04:19,530 --> 00:04:17,570
powerful argument that I think drives

85
00:04:22,030 --> 00:04:19,540
them away from science or away from

86
00:04:23,620 --> 00:04:22,040
expecting evolution and I just wanted to

87
00:04:26,290 --> 00:04:23,630
get the panel's thoughts on that

88
00:04:28,600 --> 00:04:26,300

particular point okay well i'll start

89

00:04:30,910 --> 00:04:28,610

off and dr. scott knows far more about

90

00:04:34,240 --> 00:04:30,920

this area than i do so if she said I'm

91

00:04:36,280 --> 00:04:34,250

wrong than believe or not me okay the

92

00:04:38,530 --> 00:04:36,290

first point I'd make is that if you say

93

00:04:40,570 --> 00:04:38,540

that evolution is empty god it depends

94

00:04:43,630 --> 00:04:40,580

on your definition of God and it depends

95

00:04:45,010 --> 00:04:43,640

what you think God is doing now there is

96

00:04:47,380 --> 00:04:45,020

a British scientist called Dennis

97

00:04:49,390 --> 00:04:47,390

Alexander he works on top scientific

98

00:04:51,490 --> 00:04:49,400

establishment and he is a devoted

99

00:04:55,480 --> 00:04:51,500

Christian he believes that the Bible is

100

00:04:58,000 --> 00:04:55,490

the Word of God but for him God is

101
00:05:00,700 --> 00:04:58,010
constantly responsible for maintaining

102
00:05:04,390 --> 00:05:00,710
all aspects of the universe so equals

103
00:05:06,790 --> 00:05:04,400
mc-squared that God if DNA has a double

104
00:05:09,490 --> 00:05:06,800
helix God is actively maintaining all

105
00:05:11,320 --> 00:05:09,500
scientific processes all the time now

106
00:05:14,080 --> 00:05:11,330
therefore from Alexander's point of view

107
00:05:17,080 --> 00:05:14,090
evolution is one of the processes by

108
00:05:18,790 --> 00:05:17,090
which God is working in our universe and

109
00:05:21,220 --> 00:05:18,800
therefore from that viewpoint no

110
00:05:23,440 --> 00:05:21,230
evolution cannot possibly be auntie God

111
00:05:25,960 --> 00:05:23,450
because it is actually a design process

112
00:05:27,520 --> 00:05:25,970
now more generators a misunderstanding

113
00:05:29,830 --> 00:05:27,530

of science here science generally

114

00:05:31,719 --> 00:05:29,840

speaking is at this worldly process

115

00:05:33,940 --> 00:05:31,729

scientists are trying to understand how

116

00:05:35,279 --> 00:05:33,950

this world works in terms of the

117

00:05:37,379 --> 00:05:35,289

processes which go on

118

00:05:40,019 --> 00:05:37,389

in this world because you can't

119

00:05:41,909 --> 00:05:40,029

understand the dog by definition you

120

00:05:44,100 --> 00:05:41,919

cannot simply read the mind of God and

121

00:05:46,649 --> 00:05:44,110

then do a science of how God is going to

122

00:05:49,049 --> 00:05:46,659

be in the world therefore Sciences human

123

00:05:51,959 --> 00:05:49,059

process consumer working out how this

124

00:05:54,359 --> 00:05:51,969

universe works and therefore again for

125

00:05:57,719 --> 00:05:54,369

that reason science cannot be anti-god

126

00:06:01,139 --> 00:05:57,729

either I think there's a there's another

127

00:06:03,719 --> 00:06:01,149

thing going on not just with the concept

128

00:06:08,040 --> 00:06:03,729

of you know how you define God but also

129

00:06:10,529 --> 00:06:08,050

a lot of my students when they do

130

00:06:12,899 --> 00:06:10,539

respond with this is why I don't believe

131

00:06:14,459 --> 00:06:12,909

in evolution they tell me I don't

132

00:06:17,429 --> 00:06:14,469

believe in evolution because I believe

133

00:06:18,929 --> 00:06:17,439

that God created life and that's a

134

00:06:21,389 --> 00:06:18,939

fundamental misunderstanding of what

135

00:06:23,189 --> 00:06:21,399

evolution is so the rejecting a theory

136

00:06:25,109 --> 00:06:23,199

they don't actually understand the

137

00:06:28,019 --> 00:06:25,119

rejecting something other than the

138

00:06:29,159 --> 00:06:28,029

theory itself so I think there's two two

139

00:06:31,949 --> 00:06:29,169

things going on there's a

140

00:06:33,420 --> 00:06:31,959

misunderstanding of evolution and first

141

00:06:35,129 --> 00:06:33,430

they have to understand that before they

142

00:06:38,790 --> 00:06:35,139

can really think about does that

143

00:06:41,369 --> 00:06:38,800

conflict with my beliefs actually I'm at

144

00:06:43,529 --> 00:06:41,379

five thirty years of work for the next 5

145

00:06:49,490 --> 00:06:43,539

30 i'll be giving a talk on intelligent

146

00:06:56,640 --> 00:06:52,200

for more details go to dr. Scott's call

147

00:07:00,000 --> 00:06:56,650

the talk will be longer that's that's

148

00:07:01,950 --> 00:07:00,010

that's the abstract but the first I'm

149

00:07:03,570 --> 00:07:01,960

the first half of the lecture about is

150

00:07:06,030 --> 00:07:03,580

going to be about the nature of science

151
00:07:08,010 --> 00:07:06,040
you know what is science is a no as a

152
00:07:10,620 --> 00:07:08,020
way of knowing science as an

153
00:07:14,100 --> 00:07:10,630
epistemology t is the big words and

154
00:07:15,780 --> 00:07:14,110
basically it's just like this I think

155
00:07:17,580 --> 00:07:15,790
we're probably all in agreement of your

156
00:07:19,920 --> 00:07:17,590
science is a way of understanding the

157
00:07:21,780 --> 00:07:19,930
natural world and there is something

158
00:07:24,060 --> 00:07:21,790
called methodological naturalism which

159
00:07:26,190 --> 00:07:24,070
means that we restrict ourselves when we

160
00:07:29,190 --> 00:07:26,200
were in our scientists at to explain

161
00:07:31,410 --> 00:07:29,200
through natural causes the reason why we

162
00:07:32,940 --> 00:07:31,420
restrict ourselves to natural causes is

163
00:07:35,670 --> 00:07:32,950

because those are the kinds we can test

164

00:07:37,530 --> 00:07:35,680

and science fundamentally is all about

165

00:07:39,840 --> 00:07:37,540

testing your explanation that's what

166

00:07:42,570 --> 00:07:39,850

makes it such a wonderful way of knowing

167

00:07:45,300 --> 00:07:42,580

it gives us more reliable information

168

00:07:47,370 --> 00:07:45,310

than any other Vista knowledge okay so

169

00:07:50,040 --> 00:07:47,380

it's about testing explanations about

170

00:07:52,350 --> 00:07:50,050

the natural world but how do we test an

171

00:07:54,360 --> 00:07:52,360

explanation well we hold constant

172

00:07:56,280 --> 00:07:54,370

certain variables we all kind of it I'm

173

00:07:57,750 --> 00:07:56,290

going really fast here but you've I in

174

00:08:00,570 --> 00:07:57,760

seventh grade science so you understand

175

00:08:04,409 --> 00:08:00,580

this you hold constant certain variables

176

00:08:07,140 --> 00:08:04,419

this is why we can't let supernatural

177

00:08:10,409 --> 00:08:07,150

explanations into science and still call

178

00:08:13,920 --> 00:08:10,419

it science you cannot hold constant

179

00:08:15,810 --> 00:08:13,930

God's efforts God is omnipotent God can

180

00:08:17,790 --> 00:08:15,820

stay on the test tube or not going the

181

00:08:20,310 --> 00:08:17,800

test strip at all I mean you can't put

182

00:08:22,620 --> 00:08:20,320

God in the testing so you just set that

183

00:08:24,680 --> 00:08:22,630

aside when you're explaining something

184

00:08:27,300 --> 00:08:24,690

we restrict ourselves to natural causes

185

00:08:30,630 --> 00:08:27,310

because those are the only kind of test

186

00:08:33,300 --> 00:08:30,640

and so for that reason we use naturalism

187

00:08:34,830 --> 00:08:33,310

as a methodology and I think every

188

00:08:36,540 --> 00:08:34,840

scientist understands that and every

189

00:08:40,770 --> 00:08:36,550

scientist does that whether they are

190

00:08:43,260 --> 00:08:40,780

believers and unbelievers Gregor Mendel

191

00:08:45,540 --> 00:08:43,270

was a theist obviously but he was also a

192

00:08:48,180 --> 00:08:45,550

methodological naturalist he came up

193

00:08:50,550 --> 00:08:48,190

with his rules of genetics solely by

194

00:08:53,280 --> 00:08:50,560

using natural causes he didn't bring him

195

00:08:56,430 --> 00:08:53,290

down at all we criticize the intelligent

196

00:09:00,450 --> 00:08:56,440

design and creationist proponents for

197

00:09:03,000 --> 00:09:00,460

trying to bring God and decides because

198

00:09:05,670 --> 00:09:03,010

obviously you can't use god as an

199

00:09:08,400 --> 00:09:05,680

explaining as an explanation and still

200

00:09:10,080 --> 00:09:08,410

call it science because can't tesco what

201
00:09:14,580 --> 00:09:10,090
that means is there's a flip side and

202
00:09:18,570 --> 00:09:14,590
the flip side is that you also can't say

203
00:09:20,970 --> 00:09:18,580
science proves God doesn't exist for the

204
00:09:24,420 --> 00:09:20,980
same reason that you can't use God

205
00:09:26,550 --> 00:09:24,430
insights God is omnipotent you cannot

206
00:09:28,050 --> 00:09:26,560
control God's actions you cannot test

207
00:09:30,030 --> 00:09:28,060
the statements having to do with God you

208
00:09:33,390 --> 00:09:30,040
have to descend on the side that doesn't

209
00:09:34,940 --> 00:09:33,400
mean Sciences anti-god any more than

210
00:09:42,170 --> 00:09:34,950
long division wasn't

211
00:09:44,780 --> 00:09:42,180
I don't want to come so much of

212
00:09:47,120 --> 00:09:44,790
mathematics I where I praying sword I

213
00:09:50,150 --> 00:09:47,130

would pray a lot but never you you you

214

00:09:52,370 --> 00:09:50,160

know you decide you do none too long

215

00:09:54,320 --> 00:09:52,380

division based on the natural process of

216

00:09:56,210 --> 00:09:54,330

mathematics you do science based on

217

00:09:58,040 --> 00:09:56,220

natural process that doesn't make long

218

00:10:00,170 --> 00:09:58,050

division anti-religious that doesn't

219

00:10:03,020 --> 00:10:00,180

make sense interpreters very few people

220

00:10:07,700 --> 00:10:03,030

think that cell division is an anti

221

00:10:10,010 --> 00:10:07,710

religious theory but once you're talking

222

00:10:11,720 --> 00:10:10,020

about human beings once you're talking

223

00:10:14,780 --> 00:10:11,730

about living things once you're talking

224

00:10:17,120 --> 00:10:14,790

about important issues that are

225

00:10:19,730 --> 00:10:17,130

important to people that's when people

226

00:10:21,980 --> 00:10:19,740

start getting nervous about evolution as

227

00:10:23,630 --> 00:10:21,990

a sense and I think one of the ways that

228

00:10:25,760 --> 00:10:23,640

we need to cope with this is be very

229

00:10:29,210 --> 00:10:25,770

clear about what science is and what it

230

00:10:31,730 --> 00:10:29,220

isn't science is a way of knowing about

231

00:10:33,260 --> 00:10:31,740

the natural world and we have to

232

00:10:34,640 --> 00:10:33,270

restrict ourselves to natural causes

233

00:10:36,080 --> 00:10:34,650

because those are the only ones who can

234

00:10:38,420 --> 00:10:36,090

test that's kind of the map will be

235

00:10:39,759 --> 00:10:38,430

limited across the room it doesn't mean

236

00:10:42,729 --> 00:10:39,769

that all scientist area

237

00:10:46,210 --> 00:10:42,739

Master building but it does mean that

238

00:10:47,979 --> 00:10:46,220

science is a limited with we often don't

239

00:10:50,079 --> 00:10:47,989

think of science as a limited way of

240

00:10:51,970 --> 00:10:50,089

life and it's sort of this this head

241

00:10:54,220 --> 00:10:51,980

robotic presentation of science that

242

00:10:57,069 --> 00:10:54,230

makes many conservative religious people

243

00:10:58,749 --> 00:10:57,079

very nervous about science and they

244

00:11:00,100 --> 00:10:58,759

believe that the state the next

245

00:11:01,689 --> 00:11:00,110

statement to come out is that well

246

00:11:05,319 --> 00:11:01,699

therefore take your garden Charlotte and

247

00:11:07,989 --> 00:11:05,329

that's not my sinuses one of the main

248

00:11:09,549 --> 00:11:07,999

problems that we have in which has been

249

00:11:11,379 --> 00:11:09,559

echoed by my colleagues that we with the

250

00:11:14,579 --> 00:11:11,389

creation and evolution issue is that

251
00:11:17,350 --> 00:11:14,589
many non-scientists in the community

252
00:11:19,269 --> 00:11:17,360
believe that they have to choose between

253
00:11:21,669 --> 00:11:19,279
science and religion if they really

254
00:11:24,189 --> 00:11:21,679
understand what science is and what it

255
00:11:25,840 --> 00:11:24,199
is great for and its limitations that is

256
00:11:27,369 --> 00:11:25,850
not a necessary conclusion to come to

257
00:11:29,739 --> 00:11:27,379
and I think they'll all be a lot more

258
00:11:31,900 --> 00:11:29,749
relaxed about about the teaching of

259
00:11:34,780 --> 00:11:31,910
evolution their kids that's that's a

260
00:11:36,519 --> 00:11:34,790
great point no I just want to share a

261
00:11:40,299 --> 00:11:36,529
quick anecdote about how I deal with

262
00:11:42,549 --> 00:11:40,309
this in my classroom as as a physics

263
00:11:45,609 --> 00:11:42,559

teacher because when I teach physics I

264

00:11:47,879 --> 00:11:45,619

always go into cosmology the big bang

265

00:11:51,249 --> 00:11:47,889

and so on and just so everybody knows if

266

00:11:53,769 --> 00:11:51,259

you think that creationists only go

267

00:11:57,100 --> 00:11:53,779

after biological evolution think again

268

00:11:58,859 --> 00:11:57,110

okay they they are targeting all a lot

269

00:12:02,319 --> 00:11:58,869

of different areas of science in general

270

00:12:05,350 --> 00:12:02,329

cosmology geology they're now starting

271

00:12:08,829 --> 00:12:05,360

to go after neuroscience so it's not

272

00:12:11,799 --> 00:12:08,839

just talking about no for you know ninth

273

00:12:13,840 --> 00:12:11,809

grade biology but the way I deal with

274

00:12:15,789 --> 00:12:13,850

this my classroom is I just I tackled

275

00:12:19,030 --> 00:12:15,799

right up front that's one of the reasons

276

00:12:20,139 --> 00:12:19,040

I made the first questioner I go into my

277

00:12:21,879 --> 00:12:20,149

students and I say look you know we're

278

00:12:25,780 --> 00:12:21,889

going to talk about Big Bang cosmology

279

00:12:26,769 --> 00:12:25,790

cosmic evolution someone I said but this

280

00:12:28,629 --> 00:12:26,779

do you guys got to remember this is a

281

00:12:29,889 --> 00:12:28,639

science classroom here right we're not

282

00:12:31,780 --> 00:12:29,899

talking theology we're not talking

283

00:12:34,180 --> 00:12:31,790

philosophy I you know

284

00:12:35,620 --> 00:12:34,190

you want to get into all of that stuff

285

00:12:40,030 --> 00:12:35,630

you got to take a different course down

286

00:12:42,430 --> 00:12:40,040

the hall and I said and some of you it I

287

00:12:44,620 --> 00:12:42,440

will be explaining the the most current

288

00:12:47,800 --> 00:12:44,630

and best science we have and some of you

289

00:12:49,510 --> 00:12:47,810

may have an internal conflict with your

290

00:12:52,390 --> 00:12:49,520

particular religious or philosophical

291

00:12:55,390 --> 00:12:52,400

beliefs and then I put the onus on the

292

00:12:57,970 --> 00:12:55,400

student because what i say as i say if

293

00:13:01,210 --> 00:12:57,980

you fall into this category if you find

294

00:13:02,830 --> 00:13:01,220

that you have a problem reconciling your

295

00:13:06,010 --> 00:13:02,840

religious beliefs with the science i'm

296

00:13:08,920 --> 00:13:06,020

teaching i leave that up to you to

297

00:13:10,720 --> 00:13:08,930

reconcile well i'm going to assume that

298

00:13:12,820 --> 00:13:10,730

you are a mature enough person that you

299

00:13:14,500 --> 00:13:12,830

can figure it out for yourself because

300

00:13:16,720 --> 00:13:14,510

it's not up to me to tell you what to

301
00:13:18,130 --> 00:13:16,730
movie or not believe about God something

302
00:13:19,660 --> 00:13:18,140
to be to teach you science and that's my

303
00:13:23,400 --> 00:13:19,670
job that's the way I handle it for

304
00:13:25,750 --> 00:13:23,410
whatever it's worth um any other

305
00:13:28,110 --> 00:13:25,760
comments or questions on this particular

306
00:13:30,880 --> 00:13:28,120
point I throw in a little bit sure oh

307
00:13:33,070 --> 00:13:30,890
you know I ended Pierce mean I teach

308
00:13:34,300 --> 00:13:33,080
biological anthropology so not only am I

309
00:13:36,280 --> 00:13:34,310
going to ask people to believe in

310
00:13:37,870 --> 00:13:36,290
evolution I'm also going to ask them to

311
00:13:41,050 --> 00:13:37,880
believe that they have a common ancestor

312
00:13:42,310 --> 00:13:41,060
with you know monkeys and apes and that

313
00:13:44,050 --> 00:13:42,320

over the course of the last six or so

314

00:13:45,670 --> 00:13:44,060

million years we have evolved from a

315

00:13:48,520 --> 00:13:45,680

primitive state to a slightly more

316

00:13:49,930 --> 00:13:48,530

dancing it appears to me after teaching

317

00:13:52,020 --> 00:13:49,940

this for a number of years that this is

318

00:13:54,550 --> 00:13:52,030

much more cultural than it is

319

00:13:56,110 --> 00:13:54,560

histological I think that a scientist we

320

00:13:57,430 --> 00:13:56,120

approach these things as mr. balaji

321

00:13:59,620 --> 00:13:57,440

trying to understand what the nature of

322

00:14:00,820 --> 00:13:59,630

knowledge actually is butta most of our

323

00:14:03,460 --> 00:14:00,830

students are approaching this as a

324

00:14:05,290 --> 00:14:03,470

conflict of culture and your culture is

325

00:14:07,390 --> 00:14:05,300

a set of values and beliefs that you get

326

00:14:09,310 --> 00:14:07,400

is sort of a unit and you're not just

327

00:14:11,500 --> 00:14:09,320

unable to go ahead and pick and choose

328

00:14:14,410 --> 00:14:11,510

what aspects of those culture you can

329

00:14:15,490 --> 00:14:14,420

accept and not accept so in a way it's

330

00:14:17,260 --> 00:14:15,500

that sort of baby with the bathwater

331

00:14:19,990 --> 00:14:17,270

argument I think that in most cases

332

00:14:22,540 --> 00:14:20,000

people are feeling like they're put to

333

00:14:25,480 --> 00:14:22,550

the point of either accepting everything

334

00:14:26,710 --> 00:14:25,490

that I have to say or none of it and as

335

00:14:28,870 --> 00:14:26,720

I think most people here would agree

336

00:14:31,990 --> 00:14:28,880

that's really I think that's a sad sort

337

00:14:33,140 --> 00:14:32,000

of a state of affairs just a quick point

338

00:14:34,640 --> 00:14:33,150

of order on if you do

339

00:14:36,170 --> 00:14:34,650

question what's and let's belong to them

340

00:14:39,260 --> 00:14:36,180

for a little bit because we will ever do

341

00:14:43,940 --> 00:14:39,270

a nice at the entrance I have something

342

00:14:46,580 --> 00:14:43,950

really important okay I'm taking risk

343

00:14:48,110 --> 00:14:46,590

and doing this but I'm hoping that this

344

00:14:51,260 --> 00:14:48,120

is a friendly audience and they were

345

00:14:53,060 --> 00:14:51,270

serving more than us on my side I may be

346

00:14:56,330 --> 00:14:53,070

making a big mistake this may end up on

347

00:15:02,420 --> 00:14:56,340

YouTube tomorrow I don't believe in

348

00:15:04,430 --> 00:15:02,430

evolution you must set bomb the other

349

00:15:06,890 --> 00:15:04,440

should I just believe in the kinetic

350

00:15:09,530 --> 00:15:06,900

theory of matter I don't believe in cell

351
00:15:11,930 --> 00:15:09,540
division I don't believe Angela centrist

352
00:15:13,720 --> 00:15:11,940
politically I think what I do believe

353
00:15:17,990 --> 00:15:13,730
and I believe in freedom of speech I

354
00:15:22,790 --> 00:15:18,000
believe in June change of the last image

355
00:15:25,760 --> 00:15:22,800
i believe that we should do a lot of

356
00:15:28,430 --> 00:15:25,770
things to try to help our planet stay

357
00:15:31,220 --> 00:15:28,440
clean i believe that we should have

358
00:15:33,200 --> 00:15:31,230
universal health care i believe what my

359
00:15:37,010 --> 00:15:33,210
husband is the best-looking funniest and

360
00:15:39,980 --> 00:15:37,020
smartest man world but i don't believe

361
00:15:43,490 --> 00:15:39,990
in evolution i would hope you don't

362
00:15:44,900 --> 00:15:43,500
either we get out of that habit we don't

363
00:15:47,000 --> 00:15:44,910

need to include other members of society

364

00:15:48,800 --> 00:15:47,010

Givens we scientists and members of

365

00:15:51,380 --> 00:15:48,810

society so we don't talk about believing

366

00:15:53,300 --> 00:15:51,390

the kinetic theory matter but we kind of

367

00:15:56,660 --> 00:15:53,310

fall into that trap of talking about the

368

00:15:58,310 --> 00:15:56,670

b-word in connection with your try to

369

00:15:59,010 --> 00:15:58,320

break yourself of the habit of saying

370

00:16:02,500 --> 00:15:59,020

you believe in

371

00:16:04,270 --> 00:16:02,510

cuz your dogs but if people think

372

00:16:07,330 --> 00:16:04,280

evolution is a belief well then your

373

00:16:09,790 --> 00:16:07,340

belief is no better enable a very good

374

00:16:12,490 --> 00:16:09,800

verb to substitute for that is except I

375

00:16:14,650 --> 00:16:12,500

actually accept evolution because right

376

00:16:16,660 --> 00:16:14,660

now the idea that living things and

377

00:16:18,820 --> 00:16:16,670

common ancestors that's what evolution

378

00:16:20,350 --> 00:16:18,830

is the idea that living things are

379

00:16:23,110 --> 00:16:20,360

common ancestors is really the best

380

00:16:25,030 --> 00:16:23,120

explanation for fossils and the

381

00:16:27,880 --> 00:16:25,040

biochemistry and all these other kinds

382

00:16:29,590 --> 00:16:27,890

of sources of information there's not a

383

00:16:31,450 --> 00:16:29,600

belief something comes up with a better

384

00:16:33,970 --> 00:16:31,460

explanation two weeks from now that will

385

00:16:37,030 --> 00:16:33,980

be really fun I'll give us all a bunch

386

00:16:38,800 --> 00:16:37,040

of new science to do it will not tear my

387

00:16:40,960 --> 00:16:38,810

heart strings out like I'm losing my

388

00:16:45,720 --> 00:16:40,970

beliefs in the gold has been ugly no

389

00:16:51,180 --> 00:16:45,730

it's not a belief is not a belief so

390

00:16:54,010 --> 00:16:51,190

linguistics do comes does count now

391

00:16:56,320 --> 00:16:54,020

don't stop made that first statement I

392

00:16:58,600 --> 00:16:56,330

could see an absolute collective state

393

00:17:00,850 --> 00:16:58,610

in a shot over the whole room is like

394

00:17:03,449 --> 00:17:00,860

looking at a hundred and twenty statues

395

00:17:05,819 --> 00:17:03,459

for a moment I was one of them as hell

396

00:17:08,350 --> 00:17:05,829

most of us up here knew what was coming

397

00:17:14,260 --> 00:17:08,360

I guess it after a moment but being

398

00:17:16,030 --> 00:17:14,270

rather slow thinking yeah look in that

399

00:17:20,340 --> 00:17:16,040

sense sure I mean I've been called an

400

00:17:22,540 --> 00:17:20,350

evolutionist and that term is false I

401
00:17:24,429 --> 00:17:22,550
believe that if there were sufficient

402
00:17:26,620 --> 00:17:24,439
evidence against the theory of evolution

403
00:17:28,600 --> 00:17:26,630
so that if she was overthrown then I

404
00:17:30,730 --> 00:17:28,610
believe it should be thrown the help i

405
00:17:33,100 --> 00:17:30,740
do breathe that that's probably not

406
00:17:34,720 --> 00:17:33,110
going to happen because as i understand

407
00:17:37,930 --> 00:17:34,730
it from the work of scientists evidence

408
00:17:40,660 --> 00:17:37,940
is so massive that even the evolution or

409
00:17:42,430 --> 00:17:40,670
something like it is pretty well certain

410
00:17:42,980 --> 00:17:42,440
to have occurred we can say that with a

411
00:17:44,870 --> 00:17:42,990
great

412
00:17:46,700 --> 00:17:44,880
confidence but yes therefore in the

413
00:17:48,410 --> 00:17:46,710

sense of believing in the sense of what

414

00:17:50,900 --> 00:17:48,420

believes in a religion in a religious

415

00:17:52,520 --> 00:17:50,910

pay for believing in an ism yeah that's

416

00:17:54,260 --> 00:17:52,530

right we don't regard even if you nor

417

00:17:56,750 --> 00:17:54,270

any other scientific theory like that

418

00:17:59,180 --> 00:17:56,760

they are in fact established scientific

419

00:18:01,600 --> 00:17:59,190

theories exclamations of the universe

420

00:18:04,880 --> 00:18:01,610

and generally speaking it is about

421

00:18:07,460 --> 00:18:04,890

generalization whenever science has

422

00:18:09,049 --> 00:18:07,470

concluded that a theory explains the

423

00:18:11,450 --> 00:18:09,059

evidence and should be accepted as the

424

00:18:13,010 --> 00:18:11,460

only explanation the rest of us I mean

425

00:18:14,419 --> 00:18:13,020

that you would then maybe states just

426

00:18:15,980 --> 00:18:14,429

like the rest of us the rest of us can

427

00:18:18,020 --> 00:18:15,990

have a pretty fair degree of confidence

428

00:18:21,560 --> 00:18:18,030

that that very or something like it is

429

00:18:23,510 --> 00:18:21,570

something very close to the truth I just

430

00:18:25,610 --> 00:18:23,520

want to say that whenever someone asks

431

00:18:27,710 --> 00:18:25,620

me a question with that word believe and

432

00:18:31,040 --> 00:18:27,720

I just with a lot of words like this I

433

00:18:34,130 --> 00:18:31,050

always qualify it by saying if I believe

434

00:18:36,410 --> 00:18:34,140

you mean I currently hold true and then

435

00:18:41,480 --> 00:18:36,420

go from there I like that word except oh

436

00:18:43,520 --> 00:18:41,490

so much shorter yeah I actually hardly

437

00:18:47,120 --> 00:18:43,530

ever use the lib theory either you know

438

00:18:48,950 --> 00:18:47,130

because to scientist theory means

439

00:18:50,810 --> 00:18:48,960

explanation and it means the generally a

440

00:18:52,430 --> 00:18:50,820

well-founded explanation something's got

441

00:18:54,980 --> 00:18:52,440

a lot to back it up it doesn't mean

442

00:18:56,750 --> 00:18:54,990

hunch you know I have we have a booth

443

00:18:58,250 --> 00:18:56,760

over here y'all come and visit by one of

444

00:18:59,419 --> 00:18:58,260

these great t-shirts like this kind of

445

00:19:05,030 --> 00:18:59,429

friendliness near the front of

446

00:19:07,460 --> 00:19:05,040

photo/matt a wonderful I have this great

447

00:19:09,260 --> 00:19:07,470

conversation with a man who came to my

448

00:19:11,990 --> 00:19:09,270

booth and he said well you know we saw

449

00:19:14,750 --> 00:19:12,000

this evolution stuff on the table and

450

00:19:16,460 --> 00:19:14,760

you said well you know I don't know I

451
00:19:17,960 --> 00:19:16,470
think there'd be a lot fewer problems if

452
00:19:21,799 --> 00:19:17,970
they just taught evolution is a theory

453
00:19:26,440 --> 00:19:21,809
rather than effect so this is a teaching

454
00:19:29,480 --> 00:19:26,450
moment right that's not going to do it

455
00:19:30,980 --> 00:19:29,490
this is a teachable moment sorry you

456
00:19:32,810 --> 00:19:30,990
know what do you invite theory and of

457
00:19:34,700 --> 00:19:32,820
course way to met my theory was guess or

458
00:19:36,500 --> 00:19:34,710
how to something that was not really and

459
00:19:40,700 --> 00:19:36,510
so you know we talked a little bit more

460
00:19:43,040 --> 00:19:40,710
about how one of the things that I tell

461
00:19:44,990 --> 00:19:43,050
science teachers to do when parents or

462
00:19:46,970 --> 00:19:45,000
students say well the revolution is just

463
00:19:50,180 --> 00:19:46,980

theory it's not know scientists are

464

00:19:52,700 --> 00:19:50,190

giving up on evolution x / games that's

465

00:19:54,620 --> 00:19:52,710

out there so well send that student to

466

00:19:56,270 --> 00:19:54,630

your local community college economist

467

00:19:58,100 --> 00:19:56,280

library just have them pick up a half a

468

00:20:00,350 --> 00:19:58,110

dozen journals or something flip through

469

00:20:02,840 --> 00:20:00,360

the contents and see if there's any

470

00:20:05,840 --> 00:20:02,850

article in any of those general science

471

00:20:09,820 --> 00:20:05,850

or nature cell see if there's any

472

00:20:12,620 --> 00:20:09,830

article in any of those journals that

473

00:20:14,450 --> 00:20:12,630

questions whether evolution to place

474

00:20:16,790 --> 00:20:14,460

questions whether living things that

475

00:20:18,500 --> 00:20:16,800

come in ancestors what you will find is

476

00:20:21,140 --> 00:20:18,510

a lot of research going on about the

477

00:20:23,090 --> 00:20:21,150

details about the tree of life about

478

00:20:26,450 --> 00:20:23,100

mechanisms of change you find a lot of

479

00:20:28,580 --> 00:20:26,460

science going on about the details let

480

00:20:30,049 --> 00:20:28,590

me know if you find anything any article

481

00:20:31,850 --> 00:20:30,059

saying well you know maybe living things

482

00:20:33,230 --> 00:20:31,860

didn't have common answers see if

483

00:20:34,970 --> 00:20:33,240

there's anything like that and of course

484

00:20:36,680 --> 00:20:34,980

the kids actually aren't going to do it

485

00:20:37,549 --> 00:20:36,690

but they feel that if they did there

486

00:20:40,700 --> 00:20:37,559

they're going to believe the teacher

487

00:20:42,080 --> 00:20:40,710

more now but yeah if a student does this

488

00:20:44,270 --> 00:20:42,090

the student is not going to find that

489

00:20:46,490 --> 00:20:44,280

evolution is the shaking is an incident

490

00:20:48,249 --> 00:20:46,500

which is a very useful thing for

491

00:20:51,259 --> 00:20:48,259

students to know

492

00:20:53,749 --> 00:20:51,269

okay when I kind of keep things we're

493

00:20:55,609 --> 00:20:53,759

going to launder but a couple of other

494

00:20:57,919 --> 00:20:55,619

things to get at because I one of the

495

00:20:59,419 --> 00:20:57,929

things i want to do is get to sort of a

496

00:21:01,159 --> 00:20:59,429

pragmatic angle how do you how do you

497

00:21:03,919 --> 00:21:01,169

deal with this if you're a teacher or if

498

00:21:06,939 --> 00:21:03,929

you're a parent and how do you advocate

499

00:21:11,029 --> 00:21:06,949

for good science but and against this

500

00:21:12,139 --> 00:21:11,039

anti-scientific stuff but one thing I

501
00:21:14,839 --> 00:21:12,149
think it's very important for people

502
00:21:17,869 --> 00:21:14,849
understand is that and this became very

503
00:21:22,099 --> 00:21:17,879
clear to me from an article that about

504
00:21:24,889 --> 00:21:22,109
dr. Scott road years ago there are many

505
00:21:35,389 --> 00:21:24,899
different kinds thank you my uncle's

506
00:21:36,619 --> 00:21:35,399
here he did it Jeanne Jeanne Jeanne

507
00:21:37,939 --> 00:21:36,629
wrote this great article and she really

508
00:21:40,009 --> 00:21:37,949
it really drives well there are many

509
00:21:43,129 --> 00:21:40,019
different versions and forms of

510
00:21:45,309 --> 00:21:43,139
creationism I think maybe we make a

511
00:21:48,709 --> 00:21:45,319
mistake on our side sometimes by

512
00:21:50,749 --> 00:21:48,719
painting with too broad a brush because

513
00:21:54,589 --> 00:21:50,759

there really are differences within the

514

00:21:57,829 --> 00:21:54,599

creationist movement and they can really

515

00:21:59,869 --> 00:21:57,839

disagree on a lot of things and so this

516

00:22:01,999 --> 00:21:59,879

is an important thing to know too so

517

00:22:03,259 --> 00:22:02,009

let's maybe throw it out there for a few

518

00:22:10,740 --> 00:22:03,269

minutes of discussion and then we'll get

519

00:22:17,850 --> 00:22:15,120

utterly anybody okay I'll sorry that

520

00:22:23,520 --> 00:22:17,860

hurt actually okay well I'll give you

521

00:22:27,270 --> 00:22:23,530

one example for example you you often

522

00:22:29,580 --> 00:22:27,280

hear creationists make the argument for

523

00:22:31,380 --> 00:22:29,590

example that we should teach all views

524

00:22:34,530 --> 00:22:31,390

can we should teach all views in

525

00:22:37,080 --> 00:22:34,540

classroom the escalate don't actually

526

00:22:39,090 --> 00:22:37,090

did oh yeah when they say we should

527

00:22:40,680 --> 00:22:39,100

teach all views it's kind of like it's

528

00:22:42,570 --> 00:22:40,690

kind of slimy maneuver because they're

529

00:22:44,250 --> 00:22:42,580

not really meeting all views because

530

00:22:45,870 --> 00:22:44,260

then you can counter the argument saying

531

00:22:49,620 --> 00:22:45,880

oh well should we church teach the

532

00:22:51,180 --> 00:22:49,630

Muslim version of creations in at this

533

00:22:55,770 --> 00:22:51,190

particular country that's really not a

534

00:22:59,250 --> 00:22:55,780

popular option among Christians yeah and

535

00:23:00,420 --> 00:22:59,260

so there's that angle right then the

536

00:23:03,750 --> 00:23:00,430

audience about the flying spaghetti

537

00:23:06,780 --> 00:23:03,760

monster but the sticking with just

538

00:23:08,580 --> 00:23:06,790

creationism I mean I've seen many

539

00:23:11,280 --> 00:23:08,590

different styles of creations such as

540

00:23:14,220 --> 00:23:11,290

you know you have the did what many of

541

00:23:16,530 --> 00:23:14,230

us think of as the biblically literal

542

00:23:19,290 --> 00:23:16,540

fundamentalist creations these are the

543

00:23:21,870 --> 00:23:19,300

young earth creationists ye cease then

544

00:23:23,880 --> 00:23:21,880

you have the old earth creationist these

545

00:23:25,320 --> 00:23:23,890

are people who accept that the earth is

546

00:23:27,750 --> 00:23:25,330

four-and-a-half billion years old or

547

00:23:31,200 --> 00:23:27,760

that the universe is 13.7 billion years

548

00:23:33,090 --> 00:23:31,210

old at hugh Ross is a good example of

549

00:23:35,160 --> 00:23:33,100

this he's a great example of an older is

550

00:23:37,340 --> 00:23:35,170

gracious because he believes in all of

551

00:23:41,700 --> 00:23:37,350

the cosmology and accepts all of that

552

00:23:45,840 --> 00:23:41,710

but doesn't accept biological evolution

553

00:23:47,160 --> 00:23:45,850

okay and you have people everywhere in

554

00:23:52,070 --> 00:23:47,170

between and then you also have folks

555

00:23:54,630 --> 00:23:52,080

that go into this this idea that okay

556

00:23:56,520 --> 00:23:54,640

you know they just want to push the

557

00:23:57,690 --> 00:23:56,530

Bible literally for one thing and then

558

00:24:00,030 --> 00:23:57,700

you have people on the other hand who

559

00:24:02,600 --> 00:24:00,040

want to try to do everything they can to

560

00:24:04,910 --> 00:24:02,610

seem like they're avoid and pushing

561

00:24:06,590 --> 00:24:04,920

religion but they really are those are

562

00:24:09,650 --> 00:24:06,600

what I call the intelligent designers

563

00:24:12,020 --> 00:24:09,660

the people of the disco institute as i

564

00:24:18,470 --> 00:24:12,030

like to call because just go as useful

565

00:24:21,080 --> 00:24:18,480

someday so so any comments in that in

566

00:24:24,080 --> 00:24:21,090

that vein well i don't know if this as

567

00:24:27,350 --> 00:24:24,090

much use but i know that in my state the

568

00:24:29,539 --> 00:24:27,360

gravity center of Virginia which is a an

569

00:24:31,280 --> 00:24:29,549

educational center it is run by

570

00:24:35,030 --> 00:24:31,290

scientists in one way that they decided

571

00:24:37,850 --> 00:24:35,040

to sort of thumb their nose at the

572

00:24:39,680 --> 00:24:37,860

notion that you know all theories or

573

00:24:41,960 --> 00:24:39,690

more accurately two theories should be

574

00:24:44,840 --> 00:24:41,970

promoted was that they created a large

575

00:24:47,030 --> 00:24:44,850

Norwich had seven different theories of

576
00:24:49,940 --> 00:24:47,040
how the universe began including on how

577
00:24:53,150 --> 00:24:49,950
the local aboriginal population believes

578
00:24:54,650 --> 00:24:53,160
that their world was created and often I

579
00:24:56,810 --> 00:24:54,660
try to point that out as an example

580
00:24:58,850 --> 00:24:56,820
power right fine let's have the more

581
00:25:00,320 --> 00:24:58,860
it's quite a beautiful piece I'm hoping

582
00:25:02,419 --> 00:25:00,330
to see Micah need to be the people up

583
00:25:05,270 --> 00:25:02,429
there about what led them to take this

584
00:25:08,060 --> 00:25:05,280
stance and what was the reaction by the

585
00:25:10,070 --> 00:25:08,070
local what we might think of as standard

586
00:25:12,380 --> 00:25:10,080
creationists to that effort it was sort

587
00:25:22,090 --> 00:25:12,390
of more like I don't know this again so

588
00:25:24,169 --> 00:25:22,100

yeah yeah for you just might even fold

589

00:25:26,060 --> 00:25:24,179

you know you know it's really

590

00:25:29,180 --> 00:25:26,070

interesting i don't know if any of you

591

00:25:31,789 --> 00:25:29,190

have watched penn teller's show on

592

00:25:34,730 --> 00:25:31,799

showtime calm you know the children

593

00:25:36,200 --> 00:25:34,740

mailers has soap yes but they did this

594

00:25:38,320 --> 00:25:36,210

excellent in their first season they did

595

00:25:42,860 --> 00:25:38,330

this excellent a piece where they had

596

00:25:44,570 --> 00:25:42,870

genie on and and they talked about

597

00:25:45,980 --> 00:25:44,580

creationism and and they made this

598

00:25:48,919 --> 00:25:45,990

excellent little skit they were talking

599

00:25:50,790 --> 00:25:48,929

about the Raelians ok now for those of

600

00:25:54,090 --> 00:25:50,800

you who don't know the real

601
00:25:56,130 --> 00:25:54,100
the Raelians are ok now they're only

602
00:25:58,440 --> 00:25:56,140
about 50,000 Raelians in the Unites or

603
00:26:00,690 --> 00:25:58,450
sorry in the world I think so if I'm

604
00:26:02,070 --> 00:26:00,700
thinking on I'm pretty good ground here

605
00:26:03,480 --> 00:26:02,080
in assuming that none of them are

606
00:26:07,080 --> 00:26:03,490
present so I'm going to say this just

607
00:26:10,890 --> 00:26:07,090
like I think the Raelians are from what

608
00:26:14,820 --> 00:26:10,900
I understand it a new age atheistic UFO

609
00:26:16,980 --> 00:26:14,830
cult ok and they believe in intelligent

610
00:26:19,110 --> 00:26:16,990
design they just think that the

611
00:26:22,830 --> 00:26:19,120
intelligent designer or space aliens

612
00:26:25,500 --> 00:26:22,840
instead of God somehow the you know the

613
00:26:27,990 --> 00:26:25,510

the folks of the Discovery Institute are

614

00:26:29,790 --> 00:26:28,000

not looking too they're not yet they're

615

00:26:32,460 --> 00:26:29,800

not looking to ally themselves thrilling

616

00:26:36,420 --> 00:26:32,470

I don't know even though they advocate

617

00:26:38,280 --> 00:26:36,430

for intelligent design ok so but one

618

00:26:41,070 --> 00:26:38,290

thing that they do do at the Discovery

619

00:26:43,710 --> 00:26:41,080

Institute those they use that as a

620

00:26:46,800 --> 00:26:43,720

doorway to say oh you know this isn't

621

00:26:49,310 --> 00:26:46,810

about religion so they they don't

622

00:26:51,750 --> 00:26:49,320

exactly actively refute it either

623

00:26:52,830 --> 00:26:51,760

because that allows them to say well

624

00:26:55,290 --> 00:26:52,840

there are plenty of people to believe in

625

00:26:59,850 --> 00:26:55,300

intelligent design and they don't

626

00:27:02,130 --> 00:26:59,860

believe that it's God the ideas have

627

00:27:04,680 --> 00:27:02,140

this very interest i protect like this 5

628

00:27:07,800 --> 00:27:04,690

30 else or so let's get the talk about

629

00:27:12,810 --> 00:27:07,810

it they have this very strange way of

630

00:27:15,180 --> 00:27:12,820

looking at did they pay creationists are

631

00:27:16,640 --> 00:27:15,190

real enthusiast for dichotomized thing

632

00:27:20,430 --> 00:27:16,650

the intelligent design people

633

00:27:22,440 --> 00:27:20,440

dichotomize cause they have natural

634

00:27:24,330 --> 00:27:22,450

cause and intelligent cause those are

635

00:27:26,010 --> 00:27:24,340

the two kinds of causes they recognize

636

00:27:29,070 --> 00:27:26,020

the natural causes are the kind of stuff

637

00:27:31,470 --> 00:27:29,080

we would be familiar with us now the

638

00:27:33,120 --> 00:27:31,480

regular laws of nature fine everybody

639

00:27:35,580 --> 00:27:33,130

agrees with that over here on the

640

00:27:37,980 --> 00:27:35,590

intelligent calls column they have

641

00:27:38,899 --> 00:27:37,990

things like oh god that's when

642

00:27:42,320 --> 00:27:38,909

intelligent

643

00:27:44,119 --> 00:27:42,330

they have human beings leather type of

644

00:27:46,999 --> 00:27:44,129

intelligent cause we create things

645

00:27:49,460 --> 00:27:47,009

obviously too subtle degree there's some

646

00:27:51,109 --> 00:27:49,470

debate maybe the higher primates or

647

00:27:53,690 --> 00:27:51,119

dolphins they have intelligence of

648

00:27:56,330 --> 00:27:53,700

course space aliens I mean that's also

649

00:27:59,299 --> 00:27:56,340

over there on the on the intelligent

650

00:28:02,539 --> 00:27:59,309

cruise line but what's kind of

651
00:28:05,109 --> 00:28:02,549
intriguing here is that most of those

652
00:28:07,749 --> 00:28:05,119
commodities over there and the

653
00:28:11,389 --> 00:28:07,759
intelligent cause part of the diagram

654
00:28:13,519 --> 00:28:11,399
really are natural now human being space

655
00:28:15,409 --> 00:28:13,529
aliens are material beings as well

656
00:28:17,180 --> 00:28:15,419
higher primates dolphins all of those

657
00:28:19,549 --> 00:28:17,190
those are really natural objects they

658
00:28:21,349 --> 00:28:19,559
belong over here in natural class so

659
00:28:23,560 --> 00:28:21,359
really when you come right down to it

660
00:28:25,519 --> 00:28:23,570
the only intelligent cause that the

661
00:28:29,119 --> 00:28:25,529
intelligent design people are really

662
00:28:32,539 --> 00:28:29,129
talking about is transcendent cause it's

663
00:28:36,139 --> 00:28:32,549

got and when you really kind of nail

664

00:28:39,560 --> 00:28:36,149

them down to what kind of intelligence

665

00:28:43,549 --> 00:28:39,570

would be involved in especially creating

666

00:28:47,119 --> 00:28:43,559

the bacterial flagellum right time

667

00:28:49,129 --> 00:28:47,129

traveling biochemists perhaps as Michael

668

00:28:51,499 --> 00:28:49,139

Behe once suggested the hope not very

669

00:28:54,889 --> 00:28:51,509

seriously well no obviously not they're

670

00:28:56,719 --> 00:28:54,899

talking about that so it's it is really

671

00:29:05,259 --> 00:28:56,729

just rolling the pea under a different

672

00:29:10,009 --> 00:29:07,669

regarding this business there being many

673

00:29:12,109 --> 00:29:10,019

creationism I actually raised this month

674

00:29:15,889 --> 00:29:12,119

riveted creationist in Australia and

675

00:29:18,049 --> 00:29:15,899

there were the extreme young earth 6 24

676
00:29:21,499 --> 00:29:18,059
hour day creationists and the response

677
00:29:24,049 --> 00:29:21,509
was that theirs was the only true form

678
00:29:25,550 --> 00:29:24,059
of religion other religions of course

679
00:29:27,230 --> 00:29:25,560
Islam in Lewis

680
00:29:30,590 --> 00:29:27,240
is that they of course are all wrong

681
00:29:33,170 --> 00:29:30,600
they're all down furthermore anybody who

682
00:29:36,010 --> 00:29:33,180
compromises with a theistic devil its

683
00:29:39,800 --> 00:29:36,020
deadliness inspire evolutionism is

684
00:29:42,200 --> 00:29:39,810
therefore compromising with roland views

685
00:29:44,660 --> 00:29:42,210
and they are on a slippery slope which

686
00:29:47,570 --> 00:29:44,670
leads inevitably to atheism and

687
00:29:50,000 --> 00:29:47,580
damnation now that is the way that they

688
00:29:52,040 --> 00:29:50,010

see their knowing they're not the only

689

00:29:53,450 --> 00:29:52,050

kind of creation so those are fun malice

690

00:29:54,890 --> 00:29:53,460

Muslim creatures will do the same thing

691

00:29:56,420 --> 00:29:54,900

yes I'm there are a whole set of

692

00:29:58,190 --> 00:29:56,430

different kinds of fundamentalism but

693

00:30:00,050 --> 00:29:58,200

we're focus it will focus on on this

694

00:30:02,720 --> 00:30:00,060

Christian creationist one and as a

695

00:30:04,190 --> 00:30:02,730

result of that I began to see how they

696

00:30:05,990 --> 00:30:04,200

think now there may well be people in

697

00:30:08,690 --> 00:30:06,000

this room who understand this better

698

00:30:12,080 --> 00:30:08,700

than I do but the way they think is that

699

00:30:15,470 --> 00:30:12,090

their views must be held in their

700

00:30:17,330 --> 00:30:15,480

entirety or they are damned now

701
00:30:19,700 --> 00:30:17,340
therefore you can understand the kind of

702
00:30:21,380 --> 00:30:19,710
hysteria and fear that they are lan when

703
00:30:23,300 --> 00:30:21,390
for example it's send their children to

704
00:30:24,710 --> 00:30:23,310
school and you know fundamentals let

705
00:30:26,750 --> 00:30:24,720
their children just so much to anybody

706
00:30:28,820 --> 00:30:26,760
else and the children come home and they

707
00:30:30,320 --> 00:30:28,830
start to talk about Old Earth and they

708
00:30:32,870 --> 00:30:30,330
start to talk about evolution and

709
00:30:35,240 --> 00:30:32,880
therefore from their perspective their

710
00:30:37,610 --> 00:30:35,250
children are damped or you can imagine

711
00:30:41,090 --> 00:30:37,620
fundamentalist teachers in school they

712
00:30:42,410 --> 00:30:41,100
must impart the true message or else the

713
00:30:46,120 --> 00:30:42,420

children that they are teaching our

714

00:30:50,420 --> 00:30:46,130

damned so they're in a kind of sustained

715

00:30:52,370 --> 00:30:50,430

state of hysteria and fear there nor was

716

00:30:55,280 --> 00:30:52,380

in the background there are the coals

717

00:30:58,450 --> 00:30:55,290

and hell as far as I can tell that's how

718

00:31:11,650 --> 00:30:58,460

they think it's such a good boy

719

00:31:13,870 --> 00:31:11,660

no I'm talking about queens laughs now

720

00:31:16,150 --> 00:31:13,880

the area thoroughly I want to get it a

721

00:31:20,050 --> 00:31:16,160

point that that was that was made here

722

00:31:21,970 --> 00:31:20,060

by a genie a moment ago and this is of

723

00:31:25,470 --> 00:31:21,980

course kind of dovetails into the next

724

00:31:28,000 --> 00:31:25,480

couple of points I wanted to tackle and

725

00:31:31,030 --> 00:31:28,010

it also don't tell sends it into what

726
00:31:33,130 --> 00:31:31,040
you just said because in my experience

727
00:31:35,650 --> 00:31:33,140
what you've got is we've got two broad

728
00:31:37,540 --> 00:31:35,660
classes of people who third form the

729
00:31:38,770 --> 00:31:37,550
creations movement in miking you've got

730
00:31:39,760 --> 00:31:38,780
what you guys you got the people who are

731
00:31:41,790 --> 00:31:39,770
true believers like what you just

732
00:31:43,660 --> 00:31:41,800
described and these are people who are

733
00:31:44,710 --> 00:31:43,670
legitimately concerned because they

734
00:31:47,350 --> 00:31:44,720
think that if their children are

735
00:31:49,060 --> 00:31:47,360
learning us they're going to help and in

736
00:31:52,270 --> 00:31:49,070
their frame okay and then you've got

737
00:31:54,610 --> 00:31:52,280
what i call the cynics I and these are

738
00:31:56,140 --> 00:31:54,620

the people who i think for lack of a

739

00:31:58,000 --> 00:31:56,150

better term run the show in places like

740

00:32:00,850 --> 00:31:58,010

the Discovery Institute because they

741

00:32:03,730 --> 00:32:00,860

know they're lying but they do it anyway

742

00:32:05,230 --> 00:32:03,740

and this goes to a point the genie just

743

00:32:07,780 --> 00:32:05,240

saying you know the people the Discovery

744

00:32:09,940 --> 00:32:07,790

Institute will say oh this this isn't

745

00:32:11,350 --> 00:32:09,950

about religion it is about God well let

746

00:32:12,610 --> 00:32:11,360

me ask you all a question how many of

747

00:32:14,190 --> 00:32:12,620

you have heard about this little thing

748

00:32:16,240 --> 00:32:14,200

released by Discovery Institute

749

00:32:19,150 --> 00:32:16,250

inadvertently in the 90s called the

750

00:32:20,770 --> 00:32:19,160

wedge document ok if you don't know

751
00:32:24,040 --> 00:32:20,780
about the wedge document and you're at

752
00:32:27,520 --> 00:32:24,050
all concerned about this topic google it

753
00:32:29,110 --> 00:32:27,530
all right because this lays bare their

754
00:32:30,970 --> 00:32:29,120
agenda I just want to be a couple of

755
00:32:32,590 --> 00:32:30,980
quotes here right we actually have

756
00:32:34,500 --> 00:32:32,600
copies in which document up here you can

757
00:32:37,740 --> 00:32:34,510
grab afterwards if you're interested

758
00:32:40,230 --> 00:32:37,750
this is not about religion

759
00:32:42,030 --> 00:32:40,240
design Theory promises to reverse the

760
00:32:43,860 --> 00:32:42,040
stifling dominance of the materialist

761
00:32:46,110 --> 00:32:43,870
world you and to replace it with a

762
00:32:51,930 --> 00:32:46,120
science consonant with Christian

763
00:32:57,840 --> 00:32:51,940

theistic convictions one of the 20 year

764

00:33:05,020 --> 00:33:01,290

to see design Theory permeate our

765

00:33:09,850 --> 00:33:05,030

religious cultural moral and political

766

00:33:12,610 --> 00:33:09,860

life no it's not about religion you tell

767

00:33:15,610 --> 00:33:12,620

me you know I noticed something mad you

768

00:33:17,560 --> 00:33:15,620

don't have a creationist up here that

769

00:33:23,530 --> 00:33:17,570

something is kind of really lacks oh oh

770

00:33:26,620 --> 00:33:23,540

that's a good point oh okay you know you

771

00:33:30,670 --> 00:33:26,630

just presented a distortion of

772

00:33:34,540 --> 00:33:30,680

intelligent designers because obviously

773

00:33:36,970 --> 00:33:34,550

intelligent design has has philosophical

774

00:33:39,100 --> 00:33:36,980

or religious overtones but so does

775

00:33:41,200 --> 00:33:39,110

evolution I mean look at somebody like

776

00:33:48,910 --> 00:33:41,210

Gigi Simpson whippets look at somebody

777

00:33:55,900 --> 00:33:52,600

it was large turn to face ball I mean

778

00:33:57,820 --> 00:33:55,910

Gigi Simpson any number of other of

779

00:33:59,560 --> 00:33:57,830

other famous paleontologists and

780

00:34:04,840 --> 00:33:59,570

evolutionary biologists have said over

781

00:34:07,180 --> 00:34:04,850

and over that that evolution is Charles

782

00:34:09,669 --> 00:34:07,190

thymine Richard Dawkins himself has said

783

00:34:11,890 --> 00:34:09,679

that evolution makes it possible to be a

784

00:34:14,980 --> 00:34:11,900

an intellectually fulfilled atheist now

785

00:34:17,530 --> 00:34:14,990

clearly if evolution has all of these

786

00:34:20,080 --> 00:34:17,540

religious implications it must be okay

787

00:34:22,060 --> 00:34:20,090

for intelligent designed to have

788

00:34:24,159 --> 00:34:22,070

religious implications nobody's saying

789

00:34:25,990 --> 00:34:24,169

that evolution is a religious just

790

00:34:28,330 --> 00:34:26,000

because there's evidence because there's

791

00:34:31,240 --> 00:34:28,340

religious implications now intelligent

792

00:34:33,220 --> 00:34:31,250

design is a solid science it's a way of

793

00:34:35,200 --> 00:34:33,230

understanding design in the natural

794

00:34:37,060 --> 00:34:35,210

world we just want intelligent design to

795

00:34:38,830 --> 00:34:37,070

be taught as a legitimate scientific

796

00:34:41,230 --> 00:34:38,840

undertaking but unfortunately we're

797

00:34:43,960 --> 00:34:41,240

being persecuted by the establishment my

798

00:34:45,640 --> 00:34:43,970

response is a fist is very pithy if

799

00:34:47,020 --> 00:34:45,650

intelligent designers of science named

800

00:34:50,860 --> 00:34:47,030

the vaccine that you made using

801
00:34:52,750 --> 00:34:50,870
intelligent design please look hard to

802
00:34:55,450 --> 00:34:52,760
come up with vaccine I mean my goodness

803
00:34:58,450 --> 00:34:55,460
the intelligent design is in its infancy

804
00:35:00,430 --> 00:34:58,460
we can't possibly be expected to come up

805
00:35:04,060 --> 00:35:00,440
with something like vaccines and weird

806
00:35:08,320 --> 00:35:04,070
we're exploring a field that integrates

807
00:35:09,640 --> 00:35:08,330
biology and informatics and statistics

808
00:35:15,750 --> 00:35:09,650
and you expect maybe this is a

809
00:35:22,710 --> 00:35:19,500
give another nun so I just like to have

810
00:35:24,960 --> 00:35:22,720
ones back you know and I think that's

811
00:35:27,900 --> 00:35:24,970
where you're going you're eight there is

812
00:35:29,550 --> 00:35:27,910
no theory and there are no facts there

813
00:35:33,390 --> 00:35:29,560

are statements that have been made such

814

00:35:37,440 --> 00:35:33,400

as there there's irreducible complexity

815

00:35:38,880 --> 00:35:37,450

of worth which have been falsifying at

816

00:35:41,600 --> 00:35:38,890

least the evidence that they present it

817

00:35:48,690 --> 00:35:41,610

as been falsified so it hasn't produced

818

00:35:51,450 --> 00:35:48,700

anything and vaccine way we waiting far

819

00:35:55,230 --> 00:35:51,460

away from that so you actually have to

820

00:35:58,590 --> 00:35:55,240

have something to present it other than

821

00:36:01,320 --> 00:35:58,600

so I did it or I'm sorry not God did it

822

00:36:03,450 --> 00:36:01,330

an intelligent design of agents and

823

00:36:06,560 --> 00:36:03,460

intelligent agent designed it but looks

824

00:36:09,300 --> 00:36:06,570

and it's also backwards is post hoc the

825

00:36:11,880 --> 00:36:09,310

genies doing a good good job here

826

00:36:13,530 --> 00:36:11,890

langdale trafficking because this is a

827

00:36:15,450 --> 00:36:13,540

next one point because this leads right

828

00:36:16,830 --> 00:36:15,460

into the next thing and I'm taking a

829

00:36:19,170 --> 00:36:16,840

look at my watch and you can probably

830

00:36:21,240 --> 00:36:19,180

made me spend about 20 / 10 minutes on

831

00:36:23,310 --> 00:36:21,250

this next plane this is probably a very

832

00:36:26,130 --> 00:36:23,320

good place to do this now let's talk

833

00:36:29,100 --> 00:36:26,140

about the tactics that creation swings

834

00:36:31,170 --> 00:36:29,110

and how can one effectively counter

835

00:36:34,200 --> 00:36:31,180

these tactics because one thing that

836

00:36:36,140 --> 00:36:34,210

they're very good about that we all

837

00:36:41,040 --> 00:36:36,150

agree that they're lousing about science

838

00:36:45,210 --> 00:36:41,050

okay but they're very good PR very good

839

00:36:48,060 --> 00:36:45,220

at PR so how do you recognize it and how

840

00:36:52,260 --> 00:36:48,070

do you address it either as a teacher a

841

00:36:54,690 --> 00:36:52,270

student parent and advocate whatever so

842

00:36:56,910 --> 00:36:54,700

let's open it up this is one thing I've

843

00:36:59,310 --> 00:36:56,920

come across as an English teacher there

844

00:37:01,680 --> 00:36:59,320

is a popular study guide that is

845

00:37:03,030 --> 00:37:01,690

published in my state and now i believe

846

00:37:05,310 --> 00:37:03,040

it's being published in some other

847

00:37:08,790 --> 00:37:05,320

states a group called three woman and

848

00:37:11,910 --> 00:37:08,800

film and publishing what they do we is

849

00:37:13,680 --> 00:37:11,920

study notes and many quizzes for some of

850

00:37:16,080 --> 00:37:13,690

the final year's exams in high school

851
00:37:18,840 --> 00:37:16,090
and they are very neatly packaged very

852
00:37:22,220 --> 00:37:18,850
glossy and they promote creationism in

853
00:37:25,530 --> 00:37:22,230
the final pages of the book and in the

854
00:37:27,960 --> 00:37:25,540
inside cover of the book I found their

855
00:37:29,640 --> 00:37:27,970
perfect world yes whilst teaching all

856
00:37:31,710 --> 00:37:29,650
the other the study notes within our

857
00:37:33,420 --> 00:37:31,720
excellent there isn't a very good study

858
00:37:36,390 --> 00:37:33,430
guide writers but the entire thing is

859
00:37:38,070 --> 00:37:36,400
packaged with in a bit of propaganda it

860
00:37:40,500 --> 00:37:38,080
might be entertained to know that even

861
00:37:43,710 --> 00:37:40,510
the human biology study guide which

862
00:37:47,520 --> 00:37:43,720
explicitly teaches evolution is still

863
00:37:49,830 --> 00:37:47,530

packaged in creationist text and many

864

00:37:52,410 --> 00:37:49,840

schools bichri ominous study guides

865

00:37:54,300 --> 00:37:52,420

because it's nicely packaged one and it

866

00:37:56,250 --> 00:37:54,310

just pops onto the schools so pop a

867

00:37:57,540 --> 00:37:56,260

dozen schools and probably very few

868

00:37:59,700 --> 00:37:57,550

teachers pick it up flip to the back

869

00:38:01,590 --> 00:37:59,710

pages and notice that it's saying of

870

00:38:03,420 --> 00:38:01,600

course this mathematics textbook is

871

00:38:05,520 --> 00:38:03,430

demonstrating how there is indeed a

872

00:38:11,250 --> 00:38:05,530

natural order in the world and we can

873

00:38:13,310 --> 00:38:11,260

attribute that natural order to writing

874

00:38:16,200 --> 00:38:13,320

to the principal's was my strategy

875

00:38:19,200 --> 00:38:16,210

pointing it out at the English teachers

876

00:38:20,520 --> 00:38:19,210

association meeting that we had and why

877

00:38:22,200 --> 00:38:20,530

do you have to make your teachers that

878

00:38:25,340 --> 00:38:22,210

maybe you might like to try an

879

00:38:31,800 --> 00:38:25,350

alternative text I'm future Philip

880

00:38:36,900 --> 00:38:31,810

creelman see II LMA and I've written

881

00:38:38,790 --> 00:38:36,910

about it on my blog at www.calm and I

882

00:38:41,250 --> 00:38:38,800

can email you a copy I took photos

883

00:38:42,930 --> 00:38:41,260

Overson and everything was quite happy

884

00:38:44,670 --> 00:38:42,940

to go down and purchase a few copies and

885

00:38:45,799 --> 00:38:44,680

made a lot easier for me to go up to

886

00:38:49,910 --> 00:38:45,809

meeting to say

887

00:38:52,670 --> 00:38:49,920

see I h-60 Bowl I won't say another

888

00:38:53,989 --> 00:38:52,680

tactic another another tactic and

889

00:38:55,729 --> 00:38:53,999

creations will use in a good way to

890

00:38:57,469 --> 00:38:55,739

counter and this is exactly how the

891

00:39:04,309 --> 00:38:57,479

Darwins bulldogs group north of Chicago

892

00:39:07,189 --> 00:39:04,319

got started is watch watch your local

893

00:39:10,160 --> 00:39:07,199

letters to the editor right because I

894

00:39:14,120 --> 00:39:10,170

get the sense that what creationists

895

00:39:15,799 --> 00:39:14,130

will do is when they plan on moving in

896

00:39:17,029 --> 00:39:15,809

so to speak into an area to trying to

897

00:39:18,739 --> 00:39:17,039

take over in school board because this

898

00:39:21,109 --> 00:39:18,749

sort of thing almost happened where near

899

00:39:22,999 --> 00:39:21,119

where I live that they'll though I think

900

00:39:25,099 --> 00:39:23,009

what they'll do is though it looks the

901
00:39:26,390 --> 00:39:25,109
way I do is they'll grow up with these

902
00:39:29,989 --> 00:39:26,400
letters to the other and we'll see if

903
00:39:31,370 --> 00:39:29,999
they can challenge and because years ago

904
00:39:33,380 --> 00:39:31,380
there was there were all these letters

905
00:39:35,420 --> 00:39:33,390
to the editor finding suddenly popping

906
00:39:38,299 --> 00:39:35,430
up about creationism in my local paper

907
00:39:40,429 --> 00:39:38,309
and I couldn't understand it and sure

908
00:39:42,679 --> 00:39:40,439
enough a couple years after that there

909
00:39:44,929 --> 00:39:42,689
was a major push by the religious right

910
00:39:48,739 --> 00:39:44,939
to take over one of the biggest school

911
00:39:50,029 --> 00:39:48,749
districts near in the country and it was

912
00:39:51,199 --> 00:39:50,039
right near where I live and folks if

913
00:39:52,459 --> 00:39:51,209

they had been successful it would have

914

00:39:56,209 --> 00:39:52,469

been the next number i can guarantee

915

00:39:58,009 --> 00:39:56,219

that okay so what the way that Darwin's

916

00:39:59,749 --> 00:39:58,019

Bulldog has got started I personally got

917

00:40:01,249 --> 00:39:59,759

tired of seeing those creationist

918

00:40:03,109 --> 00:40:01,259

letters and nobody was countering them

919

00:40:04,489 --> 00:40:03,119

so I started talking to colleagues and

920

00:40:07,519 --> 00:40:04,499

other people and we started writing our

921

00:40:09,769 --> 00:40:07,529

letters back and now you barely see any

922

00:40:12,380 --> 00:40:09,779

creationist letters in our local paper

923

00:40:13,880 --> 00:40:12,390

anymore they lost that fight anything

924

00:40:17,419 --> 00:40:13,890

else what else you know what other

925

00:40:20,719 --> 00:40:17,429

tactics or what can we do I would I

926
00:40:22,669 --> 00:40:20,729
would strongly encourage especially

927
00:40:25,759 --> 00:40:22,679
scientists that anybody who is

928
00:40:27,439 --> 00:40:25,769
discussing this issue with someone

929
00:40:30,410 --> 00:40:27,449
especially if they're under food

930
00:40:31,670 --> 00:40:30,420
creations persuasion creationists at the

931
00:40:34,549 --> 00:40:31,680
Discovery Institute

932
00:40:37,010 --> 00:40:34,559
when dining out on scientific dogmatism

933
00:40:38,750 --> 00:40:37,020
for years they present the science

934
00:40:41,359 --> 00:40:38,760
community as dogmatic and closed-minded

935
00:40:44,210 --> 00:40:41,369
and they arguing or this link to us that

936
00:40:47,000 --> 00:40:44,220
sells very well in the United States we

937
00:40:50,599 --> 00:40:47,010
love underdogs okay they're not

938
00:40:53,240 --> 00:40:50,609

underdogs what I would encourage you to

939

00:40:55,460 --> 00:40:53,250

respond if you hear the sacrament is to

940

00:40:58,280 --> 00:40:55,470

say well actually the scientific

941

00:40:59,510 --> 00:40:58,290

community did examine their claims there

942

00:41:02,089 --> 00:40:59,520

is quite a literature out there

943

00:41:04,220 --> 00:41:02,099

discussing intelligent design or

944

00:41:06,650 --> 00:41:04,230

creation science or whatever the topic

945

00:41:08,930 --> 00:41:06,660

is there there are many books there are

946

00:41:11,450 --> 00:41:08,940

many articles much of this is online as

947

00:41:13,220 --> 00:41:11,460

well it's accessible to the public we

948

00:41:15,230 --> 00:41:13,230

didn't just look down our patrician

949

00:41:17,809 --> 00:41:15,240

scientific noses at them and dismiss

950

00:41:19,520 --> 00:41:17,819

them out of out of hand a new idea was

951
00:41:21,740 --> 00:41:19,530
presented we treated it like any other

952
00:41:23,990 --> 00:41:21,750
no idea when dem skis book came up when

953
00:41:27,230 --> 00:41:24,000
be his book came up these books were

954
00:41:30,260 --> 00:41:27,240
seriously reviewed by the scientific

955
00:41:31,910 --> 00:41:30,270
community and when the intelligent

956
00:41:33,620 --> 00:41:31,920
design people started holding these

957
00:41:35,780 --> 00:41:33,630
conferences at which they would invite

958
00:41:38,450 --> 00:41:35,790
real scientists and then they present

959
00:41:40,940 --> 00:41:38,460
the intelligent design stuff the real

960
00:41:42,440 --> 00:41:40,950
scientists would say okay here is where

961
00:41:44,870 --> 00:41:42,450
you're wrong here's where you went

962
00:41:46,490 --> 00:41:44,880
astray fix this this and this and the

963
00:41:48,170 --> 00:41:46,500

intelligent design people say thank you

964

00:41:49,339 --> 00:41:48,180

so much for coming to our conference it

965

00:41:51,829 --> 00:41:49,349

was just wonderful that we had this

966

00:41:53,299 --> 00:41:51,839

great dialogue and then two months later

967

00:41:54,980 --> 00:41:53,309

they'd have another conference and bring

968

00:41:56,539 --> 00:41:54,990

another bunch of virgin scientists and

969

00:41:57,890 --> 00:41:56,549

they'd say they'd be told the same

970

00:42:01,530 --> 00:41:57,900

things here's where you're wrong fix

971

00:42:05,710 --> 00:42:01,540

this this this and this process

972

00:42:07,570 --> 00:42:05,720

they were told over and over what the

973

00:42:09,730 --> 00:42:07,580

mistakes of intelligent design were in

974

00:42:12,040 --> 00:42:09,740

content as well as a methodology and

975

00:42:14,380 --> 00:42:12,050

they have ignored the scientific

976
00:42:16,390 --> 00:42:14,390
response this is why they are ignored by

977
00:42:17,950 --> 00:42:16,400
the scientific community but it's very

978
00:42:19,440 --> 00:42:17,960
important that the public understand

979
00:42:22,510 --> 00:42:19,450
that they weren't dismissed out of hand

980
00:42:24,430 --> 00:42:22,520
there are there are arguments and ideas

981
00:42:26,350 --> 00:42:24,440
were examined there is an extensive

982
00:42:28,390 --> 00:42:26,360
literature analyzing intelligent design

983
00:42:30,310 --> 00:42:28,400
be sure that the person who people

984
00:42:31,930 --> 00:42:30,320
you're talking with understanding they

985
00:42:35,380 --> 00:42:31,940
still aren't either there there's the

986
00:42:37,480 --> 00:42:35,390
Thera forms where you know people will

987
00:42:39,310 --> 00:42:37,490
debate them seriously michael shermer

988
00:42:43,060 --> 00:42:39,320

does that once in a while with hugh Ross

989

00:42:45,370 --> 00:42:43,070

and so forth and it's interesting to

990

00:42:49,900 --> 00:42:45,380

watch but we started have debates look

991

00:42:52,240 --> 00:42:49,910

at that okay I can just compare with

992

00:42:53,860 --> 00:42:52,250

what happened in Queensland intelligent

993

00:42:55,840 --> 00:42:53,870

design doesn't seem to be a threat it

994

00:42:57,610 --> 00:42:55,850

doesn't exist there the big threat the

995

00:42:59,830 --> 00:42:57,620

massive threat which nearly took over

996

00:43:02,260 --> 00:42:59,840

Queensland education system was creation

997

00:43:05,470 --> 00:43:02,270

science and I remember way way back to

998

00:43:08,050 --> 00:43:05,480

25 years ago now a an enthusiastic

999

00:43:11,050 --> 00:43:08,060

fundamentalist put into my hand a pile

1000

00:43:14,230 --> 00:43:11,060

of highly coloured creationist magazines

1001
00:43:17,350 --> 00:43:14,240
and he got me to promise that I would

1002
00:43:19,150 --> 00:43:17,360
read them and I read them and they're

1003
00:43:21,040 --> 00:43:19,160
the same kind of ugly you can in fact

1004
00:43:23,230 --> 00:43:21,050
motion would pitch from over again and

1005
00:43:25,720 --> 00:43:23,240
you know I read them and if you just

1006
00:43:28,060 --> 00:43:25,730
read them if you simply look at it it

1007
00:43:30,250 --> 00:43:28,070
creates the impression of a mass of

1008
00:43:32,170 --> 00:43:30,260
genuine scientific evidence because they

1009
00:43:33,460 --> 00:43:32,180
do quote real scientists they quote them

1010
00:43:34,750 --> 00:43:33,470
they cite them very first when they

1011
00:43:36,640 --> 00:43:34,760
summarize them and it gives the

1012
00:43:38,050 --> 00:43:36,650
impression of this Titanic massive

1013
00:43:40,660 --> 00:43:38,060

evidence which is going to sweep aside

1014

00:43:42,700 --> 00:43:40,670

all this evolutionary nonsense and then

1015

00:43:46,870 --> 00:43:42,710

the truth will emerge and we all know

1016

00:43:49,180 --> 00:43:46,880

what that is so it this reflects so

1017

00:43:51,099 --> 00:43:49,190

badly on my own intelligence it took me

1018

00:43:54,009 --> 00:43:51,109

several weeks to figure out what

1019

00:43:56,170 --> 00:43:54,019

next what I did was I took the highly

1020

00:43:58,089 --> 00:43:56,180

colored scientific magazines those

1021

00:44:00,400 --> 00:43:58,099

creationist bank things down to my

1022

00:44:03,999 --> 00:44:00,410

University Library and when they refer

1023

00:44:08,380 --> 00:44:04,009

to a scientist I checked it and what am

1024

00:44:11,289 --> 00:44:08,390

I found was that the quotes were ninety

1025

00:44:13,269 --> 00:44:11,299

percent blatantly false for example Eric

1026
00:44:15,400 --> 00:44:13,279
quota scientist and they would alter the

1027
00:44:17,650 --> 00:44:15,410
words of the scientist had written to

1028
00:44:19,509 --> 00:44:17,660
mean something quite different or they

1029
00:44:21,430 --> 00:44:19,519
would take some data and they would

1030
00:44:22,839 --> 00:44:21,440
misrepresent what it meant and the

1031
00:44:25,150 --> 00:44:22,849
statistics i came up with there were two

1032
00:44:27,130 --> 00:44:25,160
statistics first that ninety percent of

1033
00:44:29,589 --> 00:44:27,140
creationist references to science were

1034
00:44:31,329 --> 00:44:29,599
blatantly false they misrepresented the

1035
00:44:33,489 --> 00:44:31,339
evidence and secondly that on average

1036
00:44:35,829 --> 00:44:33,499
every creation is reference to science

1037
00:44:37,509 --> 00:44:35,839
had two mistakes one was a major one

1038
00:44:38,890 --> 00:44:37,519

which would retain that alleging never

1039

00:44:40,720 --> 00:44:38,900

were the one was a minor one lie getting

1040

00:44:43,180 --> 00:44:40,730

all the wrong or the page wrong or the

1041

00:44:45,609 --> 00:44:43,190

date wrong now those of you who are

1042

00:44:47,650 --> 00:44:45,619

awake will say well if 90 percenter that

1043

00:44:50,319 --> 00:44:47,660

were false what about the ten percent

1044

00:44:51,970 --> 00:44:50,329

that one false well the answer is that

1045

00:44:54,940 --> 00:44:51,980

these ten percent were non-contentious

1046

00:44:57,489 --> 00:44:54,950

one of them for example was on a report

1047

00:44:58,960 --> 00:44:57,499

that an American x-ray satellite had

1048

00:45:00,789 --> 00:44:58,970

taken x-ray pictures of the Sahara

1049

00:45:03,279 --> 00:45:00,799

Desert and had discovered the tea would

1050

00:45:04,749 --> 00:45:03,289

be to be wet at one stage okay well

1051
00:45:07,350 --> 00:45:04,759
that's non-contentious there's nothing

1052
00:45:09,000 --> 00:45:07,360
in the fact

1053
00:45:11,910 --> 00:45:09,010
the distal herb it's also a perfectly

1054
00:45:14,550 --> 00:45:11,920
content content shoot compatible with

1055
00:45:16,590 --> 00:45:14,560
modern geological theory so those ten

1056
00:45:18,090 --> 00:45:16,600
percent were non-contentious wherever

1057
00:45:19,560 --> 00:45:18,100
the evidence was contentious whether

1058
00:45:21,270 --> 00:45:19,570
they claim that the evidence showed the

1059
00:45:23,970 --> 00:45:21,280
creation is right then they

1060
00:45:25,890 --> 00:45:23,980
misrepresented as a result of that I was

1061
00:45:28,080 --> 00:45:25,900
then able to write a couple of dozen

1062
00:45:29,940 --> 00:45:28,090
papers which when two teachers magazine

1063
00:45:32,250 --> 00:45:29,950

school librarians magazines and things

1064

00:45:34,980 --> 00:45:32,260

like that making it an issue of

1065

00:45:37,320 --> 00:45:34,990

integrity not an issue of religion but

1066

00:45:40,230 --> 00:45:37,330

an issue of integrity do we want our

1067

00:45:43,470 --> 00:45:40,240

children to be subjected to this kind of

1068

00:45:50,100 --> 00:45:43,480

blatant misrepresentation and the trench

1069

00:45:52,620 --> 00:45:50,110

is absolutely hated it I want to mention

1070

00:45:55,110 --> 00:45:52,630

one more thing that you know citizens

1071

00:46:00,090 --> 00:45:55,120

and people can do as a way of battling

1072

00:46:01,230 --> 00:46:00,100

the suicides and actually Kylie said

1073

00:46:03,210 --> 00:46:01,240

something a few minutes going to join my

1074

00:46:04,290 --> 00:46:03,220

memory on this um you know if you've

1075

00:46:10,350 --> 00:46:04,300

ever heard of this thing called the

1076
00:46:12,540 --> 00:46:10,360
internet star blog I did I started to

1077
00:46:14,220 --> 00:46:12,550
walk up you know eight nine months ago

1078
00:46:18,030 --> 00:46:14,230
it's called The Skeptical teacher google

1079
00:46:21,540 --> 00:46:18,040
it and hey it's enormously easy to do

1080
00:46:24,480 --> 00:46:21,550
you can actually if you use a few tricks

1081
00:46:26,940 --> 00:46:24,490
to to get traffic to it you can actually

1082
00:46:28,530 --> 00:46:26,950
reach a very wide audience if you're on

1083
00:46:33,210 --> 00:46:28,540
Facebook advertising through Facebook

1084
00:46:36,810 --> 00:46:33,220
and represent the pro science point of

1085
00:46:39,480 --> 00:46:36,820
view among your own circle of friends

1086
00:46:41,460 --> 00:46:39,490
and acquaintances and basically go viral

1087
00:46:43,290 --> 00:46:41,470
with it because i was actually amazed

1088
00:46:44,820 --> 00:46:43,300

wasn't laughing about this stuff all the

1089

00:46:46,020 --> 00:46:44,830

time my wife left me one day and said

1090

00:46:47,670 --> 00:46:46,030

she should we always start a block which

1091

00:46:50,230 --> 00:46:47,680

was code for honey i love you but shut

1092

00:46:56,870 --> 00:46:53,560

and so I did and I could not believe how

1093

00:46:58,370 --> 00:46:56,880

quickly it took off so you know that's

1094

00:46:59,990 --> 00:46:58,380

something else you can do you know check

1095

00:47:01,370 --> 00:47:00,000

your legs together respond to the letter

1096

00:47:03,920 --> 00:47:01,380

to the editor responding to comments

1097

00:47:05,360 --> 00:47:03,930

sections two letters to the editor you

1098

00:47:07,670 --> 00:47:05,370

know you know respond on message boards

1099

00:47:10,280 --> 00:47:07,680

a blog now there's all kinds of things

1100

00:47:13,550 --> 00:47:10,290

that normal everyday people can do to

1101
00:47:15,110 --> 00:47:13,560
counter this stuff one of the interviews

1102
00:47:17,540 --> 00:47:15,120
that we did for the skeptic zone

1103
00:47:19,250 --> 00:47:17,550
intriguingly enough the gentleman in

1104
00:47:21,650 --> 00:47:19,260
question we should be anonymous so we

1105
00:47:23,570 --> 00:47:21,660
had to record our questions send it to

1106
00:47:25,070 --> 00:47:23,580
them they recorded their questions

1107
00:47:29,950 --> 00:47:25,080
center back to us and we put it together

1108
00:47:32,810 --> 00:47:29,960
a pothole or 54 on YouTube who has yeah

1109
00:47:35,750 --> 00:47:32,820
visit us he is Australian or very proud

1110
00:47:37,580 --> 00:47:35,760
to say despite the lovely British accent

1111
00:47:41,830 --> 00:47:37,590
but then you two are Australian to lunch

1112
00:47:44,780 --> 00:47:41,840
Martin sir yes pot all 54 has created

1113
00:47:47,180 --> 00:47:44,790

youtube videos which are available to be

1114

00:47:48,830 --> 00:47:47,190

downloaded and sent out to people and

1115

00:47:51,230 --> 00:47:48,840

that's another way of essentially doing

1116

00:47:53,690 --> 00:47:51,240

a an audio blog and of course there's

1117

00:47:55,940 --> 00:47:53,700

podcast there's Oddcast there are the

1118

00:47:58,430 --> 00:47:55,950

fact that we are seated members freakin

1119

00:48:00,860 --> 00:47:58,440

thinking education very we got together

1120

00:48:02,450 --> 00:48:00,870

via the internet and this is the first

1121

00:48:04,310 --> 00:48:02,460

time that three of the members of the

1122

00:48:06,920 --> 00:48:04,320

group and managed to get together it was

1123

00:48:09,380 --> 00:48:06,930

just purely from their emails for awards

1124

00:48:11,450 --> 00:48:09,390

and appearances at conferences are

1125

00:48:12,920 --> 00:48:11,460

networking that way and we hope to do

1126
00:48:14,870 --> 00:48:12,930
more and touch base with even more

1127
00:48:20,160 --> 00:48:14,880
teachers of share experiences and are

1128
00:48:23,740 --> 00:48:22,390
to learn more about the panelists you

1129
00:48:27,849 --> 00:48:23,750
can check out the National Center for

1130
00:48:30,880 --> 00:48:27,859
Science Education at NCSE webs or see

1131
00:48:33,279 --> 00:48:30,890
Kevin bounce site is at see Kevin baucom

1132
00:48:35,650 --> 00:48:33,289
and the blocks of myself Matt Lowry and

1133
00:48:38,710 --> 00:48:35,660
Barbra Drescher can be found at hot

1134
00:48:49,839 --> 00:48:38,720
black com skeptical teacher da wordpress

1135
00:48:52,029 --> 00:48:49,849
com and I CBS everywhere com hi this is

1136
00:48:53,200 --> 00:48:52,039
travis from Granite State skeptics to

1137
00:48:55,240 --> 00:48:53,210
tell you about our upcoming

1138
00:48:57,579 --> 00:48:55,250

investigation of an allegedly haunted

1139

00:48:59,440 --> 00:48:57,589

location this Halloween here in New

1140

00:49:01,120 --> 00:48:59,450

Hampshire we will be posting our

1141

00:49:03,220 --> 00:49:01,130

findings live on twitter and if

1142

00:49:05,740 --> 00:49:03,230

technology permits we will be streaming

1143

00:49:07,539 --> 00:49:05,750

live video as well following the event

1144

00:49:09,789 --> 00:49:07,549

we will be meeting at the hannah duston

1145

00:49:11,490 --> 00:49:09,799

memorial in boscawen new hampshire to go

1146

00:49:14,140 --> 00:49:11,500

over the findings and take questions

1147

00:49:16,059 --> 00:49:14,150

after that we will be inviting all those

1148

00:49:18,880 --> 00:49:16,069

that attend along on another

1149

00:49:21,160 --> 00:49:18,890

investigation in Manchester it should be

1150

00:49:23,500 --> 00:49:21,170

great fun and we'd love for you to be a

1151

00:49:26,260 --> 00:49:23,510

part of it you can follow along at

1152

00:49:28,890 --> 00:49:26,270

twitter.com / GS skeptics and get more

1153

00:49:36,849 --> 00:49:28,900

details at Granite State skeptics org

1154

00:49:40,120 --> 00:49:38,769

the young scientist Awards are awarded

1155

00:49:43,299 --> 00:49:40,130

annually by the Science Teachers

1156

00:49:45,220 --> 00:49:43,309

Association of New South Wales on the 26

1157

00:49:47,079 --> 00:49:45,230

of October attended the young scientist

1158

00:49:48,940 --> 00:49:47,089

award ceremony as a representative of

1159

00:49:51,339 --> 00:49:48,950

Australian skeptics and had the pleasure

1160

00:49:53,979 --> 00:49:51,349

of seeing budding scientists aged 6 to

1161

00:49:56,950 --> 00:49:53,989

18 and I'm not joking being honored for

1162

00:49:58,720 --> 00:49:56,960

outstanding works of science awards were

1163

00:50:01,239 --> 00:49:58,730

given to all finalists which were

1164

00:50:04,599 --> 00:50:01,249

grouped by age kindergarten to year to

1165

00:50:07,930 --> 00:50:04,609

year years three to six is seven to nine

1166

00:50:09,670 --> 00:50:07,940

in years ten to twelve special awards

1167

00:50:11,950 --> 00:50:09,680

were also given for special achievements

1168

00:50:14,499 --> 00:50:11,960

in various fields of science followed by

1169

00:50:17,589 --> 00:50:14,509

the grand awards the award for young

1170

00:50:19,059 --> 00:50:17,599

scientist of the year 2009 went to Ethan

1171

00:50:21,819 --> 00:50:19,069

Batson from the Illawarra Grammar School

1172

00:50:23,229 --> 00:50:21,829

in Wollongong after the ceremony I

1173

00:50:27,370 --> 00:50:23,239

caught up with Ethan for a short

1174

00:50:29,470 --> 00:50:27,380

conversation this is Ron Cey given that

1175

00:50:31,839 --> 00:50:29,480

the young scientist awards presented by

1176
00:50:33,249 --> 00:50:31,849
the Science Teachers Association of New

1177
00:50:36,249 --> 00:50:33,259
South Wales and I'm sitting here with a

1178
00:50:40,329 --> 00:50:36,259
young scientist of the year for 2009

1179
00:50:41,950 --> 00:50:40,339
Ethan button hello Ethan do you want to

1180
00:50:44,849 --> 00:50:41,960
tell me about the project that you did

1181
00:50:47,859 --> 00:50:44,859
that one you this wonderful award

1182
00:50:50,620 --> 00:50:47,869
alright the project that I was doing was

1183
00:50:53,470 --> 00:50:50,630
I was trying to find a new measure or

1184
00:50:55,890 --> 00:50:53,480
something to measure with ultraviolet

1185
00:50:58,839 --> 00:50:55,900
radiation oh I heard about this film

1186
00:51:02,259 --> 00:50:58,849
there was left outside near the window

1187
00:51:04,479 --> 00:51:02,269
sill and it turned a deeper blue color

1188
00:51:06,220 --> 00:51:04,489

than it was actually originally so I

1189

00:51:08,499 --> 00:51:06,230
decided that I wanted to do a few

1190

00:51:10,960 --> 00:51:08,509
experiments with this film to see if it

1191

00:51:14,589 --> 00:51:10,970
actually could measure some type of

1192

00:51:16,690 --> 00:51:14,599
radiation so I did a few tests one I put

1193

00:51:18,249 --> 00:51:16,700
it under incandescent light switch just

1194

00:51:23,470 --> 00:51:18,259
puts out visible and a little bit of

1195

00:51:25,870 --> 00:51:23,480
heat and over eight days no really no

1196

00:51:30,190 --> 00:51:25,880
change occurred ah then I put it in the

1197

00:51:32,739 --> 00:51:30,200
oven for a 50 degrees and for about five

1198

00:51:35,229 --> 00:51:32,749
minutes and no change occurred there so

1199

00:51:37,809 --> 00:51:35,239
since there are three types of

1200

00:51:40,239 --> 00:51:37,819
electromagnetic radiation that are being

1201
00:51:42,940 --> 00:51:40,249
irradiated from the Sun which is

1202
00:51:44,650 --> 00:51:42,950
ultraviolet visible light and infrared

1203
00:51:47,500 --> 00:51:44,660
which is heat

1204
00:51:50,349 --> 00:51:47,510
I had to assume that it actually did it

1205
00:51:52,240 --> 00:51:50,359
was affected by ultraviolet radiation

1206
00:51:53,880 --> 00:51:52,250
and I believe you do you drew a

1207
00:51:56,079 --> 00:51:53,890
calibration chart is that correct

1208
00:51:58,809 --> 00:51:56,089
calibration curve I used the information

1209
00:52:00,789 --> 00:51:58,819
which was I found the net optical

1210
00:52:03,640 --> 00:52:00,799
density and then I verse that version

1211
00:52:06,220 --> 00:52:03,650
this is the exposure and then it can't

1212
00:52:08,680 --> 00:52:06,230
come up with the trend line and then via

1213
00:52:13,779 --> 00:52:08,690

that trend line I found an equation that

1214

00:52:16,450 --> 00:52:13,789

was best for all of the results and that

1215

00:52:20,289 --> 00:52:16,460

pretty much allowed me to extremely

1216

00:52:22,839 --> 00:52:20,299

easily with that equation to find out

1217

00:52:25,390 --> 00:52:22,849

how long and what exposure the

1218

00:52:29,039 --> 00:52:25,400

ultraviolet radiation sensitive film

1219

00:52:31,450 --> 00:52:29,049

every T GAF chromic was exposed to

1220

00:52:33,549 --> 00:52:31,460

there's absolutely fantastic now I want

1221

00:52:35,440 --> 00:52:33,559

to point out that as I mentioned the

1222

00:52:37,450 --> 00:52:35,450

earlier a lot of people in the audience

1223

00:52:40,270 --> 00:52:37,460

kind of an inkling that you could be the

1224

00:52:42,220 --> 00:52:40,280

winner because you were on the stage

1225

00:52:46,000 --> 00:52:42,230

what about four or five times through

1226

00:52:47,650 --> 00:52:46,010

the evening so that was I was not a

1227

00:52:49,630 --> 00:52:47,660

surprise but obviously very very

1228

00:52:52,539 --> 00:52:49,640

pleasing to see on t see you there it's

1229

00:52:54,730 --> 00:52:52,549

a great achievement and now obviously

1230

00:52:56,230 --> 00:52:54,740

this is a recording so people don't see

1231

00:52:58,750 --> 00:52:56,240

you and they also haven't heard what

1232

00:52:59,829 --> 00:52:58,760

happened here during the proceedings so

1233

00:53:01,000 --> 00:52:59,839

they don't know how old you are woody

1234

00:53:04,210 --> 00:53:01,010

tell us how old you are in what year

1235

00:53:07,630 --> 00:53:04,220

you're in I mean you 7 I'm 2014 December

1236

00:53:09,519 --> 00:53:07,640

so obviously that's even that the

1237

00:53:12,720 --> 00:53:09,529

achievement of winning this award is

1238

00:53:15,039 --> 00:53:12,730

even more amazing considering your age

1239

00:53:19,450 --> 00:53:15,049

very well done congratulations he

1240

00:53:23,809 --> 00:53:21,799

yo guys i was talking to Richard

1241

00:53:25,789 --> 00:53:23,819

solvency today all right he said if we

1242

00:53:27,980 --> 00:53:25,799

record a trailer for our podcast

1243

00:53:30,020 --> 00:53:27,990

skeptics with a que he'd play it on the

1244

00:53:31,279 --> 00:53:30,030

other Shore nice nice of him that's very

1245

00:53:32,750 --> 00:53:31,289

generous it's pretty good i'm not sure

1246

00:53:34,279 --> 00:53:32,760

what we could do though I mean well

1247

00:53:37,069 --> 00:53:34,289

suppose you tell people the shows about

1248

00:53:38,990 --> 00:53:37,079

but it's basically this yeah but yeah

1249

00:53:40,730 --> 00:53:39,000

but you know we talk about science and

1250

00:53:41,720 --> 00:53:40,740

skepticism and things that's that's true

1251
00:53:43,670 --> 00:53:41,730
I suppose you know you mentioned the

1252
00:53:45,770 --> 00:53:43,680
website address not merseyside skeptics

1253
00:53:47,390 --> 00:53:45,780
todo UK yeah yeah just like searches

1254
00:53:49,849 --> 00:53:47,400
nineteen's oh and then we could end with

1255
00:53:53,000 --> 00:53:49,859
like a big song like the skeptics with

1256
00:53:57,230 --> 00:53:53,010
okay oh no no no no no don't don't do

1257
00:53:59,510 --> 00:53:57,240
that welcome to the token skeptic quick

1258
00:54:01,700 --> 00:53:59,520
roundup of blog sites podcasts and

1259
00:54:03,529 --> 00:54:01,710
conferences coming up the Australian

1260
00:54:05,750 --> 00:54:03,539
skeptics national convention is even

1261
00:54:07,700 --> 00:54:05,760
closer now our very own dr. Rachel

1262
00:54:09,710 --> 00:54:07,710
Dunlop will be presenting in Brisbane at

1263
00:54:12,950 --> 00:54:09,720

the University of Queensland from

1264

00:54:14,690 --> 00:54:12,960

November the 27th to the 29th dr. Martin

1265

00:54:16,460 --> 00:54:14,700

bridge stock who you just heard on the

1266

00:54:18,980 --> 00:54:16,470

panel discussion for this week's episode

1267

00:54:21,109 --> 00:54:18,990

will be doing a book launch for beyond

1268

00:54:23,329 --> 00:54:21,119

belief skepticism science and the

1269

00:54:25,490 --> 00:54:23,339

paranormal this has been published by

1270

00:54:27,049 --> 00:54:25,500

Cambridge University Press and should be

1271

00:54:28,640 --> 00:54:27,059

of interest to all of those keen on

1272

00:54:30,890 --> 00:54:28,650

either learning or teaching about

1273

00:54:34,099 --> 00:54:30,900

skepticism the Australian skeptics

1274

00:54:36,799 --> 00:54:34,109

website at skeptics com au has further

1275

00:54:38,510 --> 00:54:36,809

details monster talk podcast is now

1276

00:54:40,940 --> 00:54:38,520

partnered with skeptic magazine and

1277

00:54:43,490 --> 00:54:40,950

skipped akala T podcast head on over to

1278

00:54:45,349 --> 00:54:43,500

monster talk dot org to listen to the

1279

00:54:47,660 --> 00:54:45,359

podcast team talk about the science

1280

00:54:50,059 --> 00:54:47,670

behind cryptozoological and legendary

1281

00:54:52,460 --> 00:54:50,069

creatures such as Bigfoot the Loch Ness

1282

00:54:54,859 --> 00:54:52,470

monster werewolves and Benjamin Radford

1283

00:54:56,930 --> 00:54:54,869

Tim Minchin is about to start his second

1284

00:54:58,730 --> 00:54:56,940

Australian tour and you might still be

1285

00:55:01,279 --> 00:54:58,740

able to find tickets by checking Tim

1286

00:55:03,230 --> 00:55:01,289

Minchin com the ready for this tour DVD

1287

00:55:05,089 --> 00:55:03,240

has been released in australia for about

1288

00:55:06,650 --> 00:55:05,099

a month now so if you haven't had the

1289

00:55:09,279 --> 00:55:06,660

chance you can still see the show at

1290

00:55:11,809 --> 00:55:09,289

home and download the songs on itunes

1291

00:55:13,760 --> 00:55:11,819

finally the rise of atheism conference

1292

00:55:15,829 --> 00:55:13,770

is not deterred by denial of service

1293

00:55:17,720 --> 00:55:15,839

attacks their website is working fine

1294

00:55:23,030 --> 00:55:17,730

and they're still selling tickets at

1295

00:55:30,750 --> 00:55:26,580

and now enjoy a few snippets of the

1296

00:55:34,290 --> 00:55:30,760

radio show dr. HC and I did with Glenn

1297

00:55:36,660 --> 00:55:34,300

wheeler on sydney's radio 2 GB ok let's

1298

00:55:39,540 --> 00:55:36,670

let's look at some some alternate

1299

00:55:41,430 --> 00:55:39,550

examples of where you guys like to

1300

00:55:43,410 --> 00:55:41,440

analyze whether it's true or not and I

1301

00:55:47,160 --> 00:55:43,420

mentioned earlier on about the spoon

1302

00:55:49,980 --> 00:55:47,170

bending exits on Yuri Gillen who was you

1303

00:55:52,950 --> 00:55:49,990

know I guess probably more famous what

1304

00:55:54,270 --> 00:55:52,960

in the 1770s drifting into the 80s he

1305

00:55:56,160 --> 00:55:54,280

sort of tried to have a come back in the

1306

00:55:58,230 --> 00:55:56,170

90s I think he's still buzzing around

1307

00:55:59,970 --> 00:55:58,240

business yeah still bending spoons oh

1308

00:56:02,670 --> 00:55:59,980

yeah yeah that sees one of these four

1309

00:56:05,990 --> 00:56:02,680

tricks with one of four tricks he does

1310

00:56:08,580 --> 00:56:06,000

are you such a you are such a bit

1311

00:56:11,040 --> 00:56:08,590

now spoon bending is is a trick you can

1312

00:56:12,780 --> 00:56:11,050

learn from the the books it really does

1313

00:56:14,790 --> 00:56:12,790

it so easily with one finger well I tell

1314

00:56:16,200 --> 00:56:14,800

you what grab that spoon oh yeah i'm

1315

00:56:17,220 --> 00:56:16,210

passing lane a spoon at the moment

1316

00:56:19,890 --> 00:56:17,230

happen to have a stand with i do

1317

00:56:21,960 --> 00:56:19,900

retching you have a spoon too I've got a

1318

00:56:23,820 --> 00:56:21,970

spoon here brother now you're happy or

1319

00:56:26,190 --> 00:56:23,830

that spoon yeah yeah it's a metal spoon

1320

00:56:27,960 --> 00:56:26,200

folks it's a silver metal teaspoon that

1321

00:56:30,060 --> 00:56:27,970

you would have in your country girl give

1322

00:56:32,370 --> 00:56:30,070

it a little flex like that yep just make

1323

00:56:33,630 --> 00:56:32,380

sure it's nice and firm okay you happy

1324

00:56:35,310 --> 00:56:33,640

to that spoon right yep you have the

1325

00:56:37,950 --> 00:56:35,320

it's really no particles pass that one

1326

00:56:40,980 --> 00:56:37,960

back to me for a second yep now you take

1327

00:56:42,540 --> 00:56:40,990

that one right now what I'm going to do

1328

00:56:44,820 --> 00:56:42,550

is it hold up your spoon yeah right yep

1329

00:56:46,140 --> 00:56:44,830

hold it right there yeah start tweedle

1330

00:56:48,360 --> 00:56:46,150

the bottom and you'll see an optical

1331

00:56:50,100 --> 00:56:48,370

illusion taking place now I'm just

1332

00:56:53,880 --> 00:56:50,110

wiggling my spin see how that looks like

1333

00:56:55,830 --> 00:56:53,890

it's going really yeah yeah yeah I can

1334

00:56:57,990 --> 00:56:55,840

serve tonight yeah and the more you do

1335

00:57:00,780 --> 00:56:58,000

it the more it looks like it's getting

1336

00:57:02,070 --> 00:57:00,790

robbery and bending it almost looks like

1337

00:57:04,970 --> 00:57:02,080

it's made of plastic right actually

1338

00:57:13,950 --> 00:57:04,980

yours it you know those yours is bending

1339

00:57:16,050 --> 00:57:13,960

no come on like I said hang on a trick

1340

00:57:18,390 --> 00:57:16,060

you can learn so that Nick out of a book

1341

00:57:20,220 --> 00:57:18,400

Nick sitting outside doing our phones

1342

00:57:22,530 --> 00:57:20,230

tonight now listen that come on now do

1343

00:57:24,510 --> 00:57:22,540

it with it now that we're that's been

1344

00:57:26,430 --> 00:57:24,520

there we go all right what I'll do with

1345

00:57:27,780 --> 00:57:26,440

this too hope you take that one what

1346

00:57:29,190 --> 00:57:27,790

I'll do with this because I get to hang

1347

00:57:30,390 --> 00:57:29,200

out too many screws didn't you been that

1348

00:57:32,040 --> 00:57:30,400

then you've been the hug but I've got

1349

00:57:33,480 --> 00:57:32,050

lots of speech maker hold its been like

1350

00:57:35,520 --> 00:57:33,490

you bend the spoon was this is one you

1351
00:57:38,700 --> 00:57:35,530
no no one its prey you're broken break

1352
00:57:40,080 --> 00:57:38,710
it like I said this is unbelievable will

1353
00:57:41,940 --> 00:57:40,090
you take that one you take that one now

1354
00:57:43,710 --> 00:57:41,950
right just pop it here just rub it like

1355
00:57:45,690 --> 00:57:43,720
that instead of breaking it will try to

1356
00:57:51,690 --> 00:57:45,700
make this end curl up they see see how

1357
00:57:54,690 --> 00:57:51,700
that's curling up like that yeah what

1358
00:57:58,440 --> 00:57:54,700
stop hang on there we generally good

1359
00:57:59,700 --> 00:57:58,450
trick for radio isn't this is oh yeah

1360
00:58:01,440 --> 00:57:59,710
that is bizarre all right I've never

1361
00:58:02,790 --> 00:58:01,450
seen you do that before let me just tell

1362
00:58:05,190 --> 00:58:02,800
the people at home because you're not

1363
00:58:06,750 --> 00:58:05,200

Rachel there's ribs of ocean oh god this

1364

00:58:08,880 --> 00:58:06,760

is radio so people at home going what

1365

00:58:10,500 --> 00:58:08,890

the hell are they you know we're doing

1366

00:58:12,990 --> 00:58:10,510

the uri geller exercise here and I've

1367

00:58:14,430 --> 00:58:13,000

got the Australian skeptics sitting in

1368

00:58:15,960 --> 00:58:14,440

here showing me that you know what uri

1369

00:58:17,250 --> 00:58:15,970

geller used to do all those years ago on

1370

00:58:20,070 --> 00:58:17,260

the don line show and various other

1371

00:58:22,230 --> 00:58:20,080

programs was albeit it but it's a trick

1372

00:58:24,720 --> 00:58:22,240

now the thing about spoon bathing is

1373

00:58:26,370 --> 00:58:24,730

it's a great trick and magicians have

1374

00:58:28,410 --> 00:58:26,380

been doing it for years and entertaining

1375

00:58:30,600 --> 00:58:28,420

people legitimately and making many

1376

00:58:32,940 --> 00:58:30,610

people happy if someone comes along and

1377

00:58:34,500 --> 00:58:32,950

says it's not a trick it's doing it

1378

00:58:36,240 --> 00:58:34,510

through mystical forces and I've got

1379

00:58:37,950 --> 00:58:36,250

special powers it's sort of like that's

1380

00:58:39,300 --> 00:58:37,960

just spoiling it for the magicians and

1381

00:58:41,099 --> 00:58:39,310

spoiling it for the audience who will

1382

00:58:43,650 --> 00:58:41,109

come along to see a good performance and

1383

00:58:45,570 --> 00:58:43,660

as you can see I've just done it right

1384

00:58:47,310 --> 00:58:45,580

here in the studio better than Geller

1385

00:58:48,420 --> 00:58:47,320

I'm still amazed what you just did

1386

00:58:50,250 --> 00:58:48,430

because you didn't just bend the spoon

1387

00:58:51,960 --> 00:58:50,260

you broke this yeah yeah and you did it

1388

00:58:53,730 --> 00:58:51,970

without for that's that that's the

1389

00:58:55,080 --> 00:58:53,740

hallmark of a good trick if it looked

1390

00:58:56,310 --> 00:58:55,090

like a trick would be a terrible trick

1391

00:58:58,890 --> 00:58:56,320

it has to look like you're using

1392

00:59:00,359 --> 00:58:58,900

mystical magical forces Rachel I'm

1393

00:59:02,130 --> 00:59:00,369

personally by the medical aspect of all

1394

00:59:05,250 --> 00:59:02,140

of this because obviously as he said

1395

00:59:07,290 --> 00:59:05,260

before the weak and the vulnerable

1396

00:59:10,260 --> 00:59:07,300

people who are suffering with terminal

1397

00:59:12,720 --> 00:59:10,270

diagnosis I got to look for anything and

1398

00:59:14,130 --> 00:59:12,730

everything to try and cure them or at

1399

00:59:17,250 --> 00:59:14,140

least extend their life or give them

1400

00:59:19,050 --> 00:59:17,260

some quality of life ya know what are

1401
00:59:21,180 --> 00:59:19,060
the sorts of examples of things that you

1402
00:59:24,390 --> 00:59:21,190
know you've looked at that that have

1403
00:59:26,700 --> 00:59:24,400
proven to be absolute rubbish there's so

1404
00:59:28,070 --> 00:59:26,710
many Glen but I'm I suppose one of them

1405
00:59:31,620 --> 00:59:28,080
one of the things that's really

1406
00:59:33,720 --> 00:59:31,630
dangerous and a nasty is when people

1407
00:59:36,420 --> 00:59:33,730
claim that they've got cancer cures and

1408
00:59:38,700 --> 00:59:36,430
there was an incident recently in South

1409
00:59:41,220 --> 00:59:38,710
Australia where a woman was running an

1410
00:59:42,840 --> 00:59:41,230
alternative medicine clinic and she was

1411
00:59:46,589 --> 00:59:42,850
claiming she could cure cancer by

1412
00:59:49,529 --> 00:59:46,599
prescribing KFC to patients

1413
00:59:51,390 --> 00:59:49,539

and people believed it and then these

1414

00:59:53,039 --> 00:59:51,400

people have terminal cancer so as you

1415

00:59:54,329 --> 00:59:53,049

say they're desperate and they're ill

1416

00:59:56,969 --> 00:59:54,339

and they know they're going to die

1417

00:59:59,099 --> 00:59:56,979

that's not even funny I mean no no no

1418

01:00:00,329 --> 00:59:59,109

you can't even laugh at them so yeah I

1419

01:00:02,430 --> 01:00:00,339

mean a lot of the things we deal with a

1420

01:00:04,410 --> 01:00:02,440

great fun those really are we have an

1421

01:00:06,599 --> 01:00:04,420

enormous amount of fun but some of the

1422

01:00:08,249 --> 01:00:06,609

things had terribly serious yeah and of

1423

01:00:11,039 --> 01:00:08,259

course you probably also remember

1424

01:00:13,680 --> 01:00:11,049

recently the case of the young girl who

1425

01:00:16,349 --> 01:00:13,690

died as a result of contracting or

1426

01:00:19,469 --> 01:00:16,359

having a bad case of eczema and her

1427

01:00:21,630 --> 01:00:19,479

parents were recently committed and

1428

01:00:22,979 --> 01:00:21,640

charged with manslaughter because they

1429

01:00:25,049 --> 01:00:22,989

didn't get her eczema treated and they

1430

01:00:27,390 --> 01:00:25,059

were using homeopathy and homeopathy

1431

01:00:29,219 --> 01:00:27,400

there's really no evidence that it does

1432

01:00:31,079 --> 01:00:29,229

anything either in fact some that's

1433

01:00:33,479 --> 01:00:31,089

another story we could talk about that

1434

01:00:35,819 --> 01:00:33,489

sometime if you're interested but when

1435

01:00:37,529 --> 01:00:35,829

people are suffering because of the

1436

01:00:40,890 --> 01:00:37,539

claims made by what we call quacks

1437

01:00:43,620 --> 01:00:40,900

that's when it does really really a lot

1438

01:00:45,569 --> 01:00:43,630

of harm it's fallen is tonight we've

1439

01:00:46,589 --> 01:00:45,579

we've just about run out of time with it

1440

01:00:47,819 --> 01:00:46,599

we've got more calls when we could

1441

01:00:49,469 --> 01:00:47,829

probably do this for an hour you know

1442

01:00:51,299 --> 01:00:49,479

because people are talking about ghosts

1443

01:00:52,859 --> 01:00:51,309

and career and all sorts of things like

1444

01:00:55,859 --> 01:00:52,869

this and you know sharing an experience

1445

01:00:57,539 --> 01:00:55,869

so we might we might reconvene with its

1446

01:00:59,609 --> 01:00:57,549

down the track in in a few weeks time

1447

01:01:00,959 --> 01:00:59,619

seems like good for it's quite a good

1448

01:01:02,880 --> 01:01:00,969

public in like a bit of a regular

1449

01:01:04,289 --> 01:01:02,890

segment of this and let people share

1450

01:01:05,819 --> 01:01:04,299

their stories and their experiences and

1451

01:01:07,650 --> 01:01:05,829

who knows we might be able to find

1452

01:01:09,150 --> 01:01:07,660

somebody out there that's that's going

1453

01:01:11,370 --> 01:01:09,160

to take you on to 100,000 bucks I'd like

1454

01:01:13,859 --> 01:01:11,380

to see that we'd like to see it too it's

1455

01:01:16,739 --> 01:01:13,869

been going for almost all over 28 well

1456

01:01:19,289 --> 01:01:16,749

30 years almost and in fact we may even

1457

01:01:20,940 --> 01:01:19,299

one that we might invite somebody into

1458

01:01:22,559 --> 01:01:20,950

the studio due to learn how to bend

1459

01:01:24,719 --> 01:01:22,569

spoons as well because know are you fun

1460

01:01:26,099 --> 01:01:24,729

I have seen that Lucas seen that nicca

1461

01:01:30,120 --> 01:01:26,109

Cena tonight I'll tell you what it was

1462

01:01:31,529 --> 01:01:30,130

it was amazing Rachel and Richard thank

1463

01:01:33,479 --> 01:01:31,539

you very much for coming to the studio

1464

01:01:34,589 --> 01:01:33,489

to join us a lot not a problem thanks

1465

01:01:35,969 --> 01:01:34,599

very much quickly mentioned in the

1466

01:01:41,339 --> 01:01:35,979

meantime if people want to find out more

1467

01:01:45,299 --> 01:01:41,349

they can go to [www.skeptic zoom](http://www.skepticzoom.com) TV or [ww](http://www.ww.com)

1468

01:01:47,579 --> 01:01:45,309

skeptics calm you wonderful thanks for

1469

01:02:02,289 --> 01:01:47,589

that it's 30 minutes and I another very

1470

01:02:07,390 --> 01:02:04,419

thank you for listening to this week's

1471

01:02:09,099 --> 01:02:07,400

episode of the skeptic zone and thank

1472

01:02:12,849 --> 01:02:09,109

you to those people who actually now

1473

01:02:14,559 --> 01:02:12,859

subscribing at 99 cents in episode 2 the

1474

01:02:17,140 --> 01:02:14,569

skeptic zone to help us keep the show

1475

01:02:21,130 --> 01:02:17,150

going you can do that via the paypal

1476

01:02:24,249 --> 01:02:21,140

links at ww skeptics on TV of course

1477

01:02:26,019 --> 01:02:24,259

this is purely voluntary if you want to

1478

01:02:28,949 --> 01:02:26,029

subscribe and helped us enormously if

1479

01:02:31,599 --> 01:02:28,959

not that's fine keep enjoying the show

1480

01:02:37,660 --> 01:02:31,609

until next week this is Richard Saunders

1481

01:02:40,059 --> 01:02:37,670

signing off from Sydney Australia you've

1482

01:02:44,679 --> 01:02:40,069

been listening to the skeptic zone visit

1483

01:02:49,270 --> 01:02:44,689

our website at WWF digs on TV the

1484

01:02:52,630 --> 01:02:49,280

comments contacts an extra video reports

1485

01:03:01,570 --> 01:02:52,640

I skin