

1
00:00:00,000 --> 00:00:04,950
hi this is JC Hutchins author of the new

2
00:00:02,490 --> 00:00:07,200
thriller novel 7 son descent in

3
00:00:04,950 --> 00:00:09,929
bookstores right now and you're

4
00:00:07,200 --> 00:00:13,789
listening to Australia's finest skeptic

5
00:00:09,929 --> 00:00:13,790
podcast the skeptic zone

6
00:00:32,530 --> 00:00:38,710
hello and welcome to the skeptic zone

7
00:00:35,299 --> 00:00:42,079
show number 54 for the 30th of oktober

8
00:00:38,710 --> 00:00:44,780
2009 Richard Saunders here with you from

9
00:00:42,079 --> 00:00:47,000
Sydney Australia on this week's show we

10
00:00:44,780 --> 00:00:50,420
have a panel recording from dragoncon

11
00:00:47,000 --> 00:00:52,519
dragon con 2009 with our good friend

12
00:00:50,420 --> 00:00:54,260
kylie Sturgis Martin bridge stock doctor

13
00:00:52,520 --> 00:00:56,080
Eugenie Scott and a host of other

14
00:00:54,259 --> 00:00:58,759
skeptics and they're talking about

15
00:00:56,079 --> 00:01:01,820
creationism and intelligent design and

16
00:00:58,759 --> 00:01:04,129
that sort of thing and after that we

17
00:01:01,820 --> 00:01:07,728
have an interview with the young New

18
00:01:04,129 --> 00:01:10,478
South Wales scientist of the year Iran

19
00:01:07,728 --> 00:01:13,159
segev our reporter in his capacity of

20
00:01:10,478 --> 00:01:15,319
president of Australian skeptics here in

21
00:01:13,159 --> 00:01:18,200
New South Wales went along to the young

22
00:01:15,319 --> 00:01:21,379
scientist of the Year award and recorded

23
00:01:18,200 --> 00:01:23,868
an interview after that our relatively

24
00:01:21,379 --> 00:01:25,659
new segment from Kylie Sturgis the token

25
00:01:23,868 --> 00:01:29,989
skeptic keeping you up to date on

26
00:01:25,659 --> 00:01:33,649
skeptical events upcoming and to wrap up

27
00:01:29,989 --> 00:01:36,560
the show we have a few little snippets

28
00:01:33,650 --> 00:01:39,050
out of the radio show dr. ray tea and I

29

00:01:36,560 --> 00:01:41,810
did here in Sydney on radio 2 GB with

30
00:01:39,049 --> 00:01:44,719
our good friend Glenn wheeler now if you

31
00:01:41,810 --> 00:01:48,640
want to hear the full radio appearance

32
00:01:44,719 --> 00:01:52,549
by dr. HC and myself on 2 GB head for ww

33
00:01:48,640 --> 00:01:55,310
skeptics on TV and we'll put that link

34
00:01:52,549 --> 00:01:57,439
in there for you while you're there you

35
00:01:55,310 --> 00:02:00,200
can check out a video i've posted of me

36
00:01:57,439 --> 00:02:03,859
and Stefan recording the intro and the

37
00:02:00,200 --> 00:02:05,570
outro for the last show so without any

38
00:02:03,859 --> 00:02:09,699
more ado let's get on with this week's

39
00:02:05,569 --> 00:02:09,699
episode of the skeptic zone

40
00:02:16,840 --> 00:02:23,120
I'm Carly Sturgis and what follows is a

41
00:02:21,199 --> 00:02:24,768
recording of a panel discussion from the

42
00:02:23,120 --> 00:02:27,980
science track at Dragon Con this year

43
00:02:24,769 --> 00:02:30,680

called Darwin's Bulldogs teachers on the

44

00:02:27,979 --> 00:02:33,109

front lines this panel was proposed by

45

00:02:30,680 --> 00:02:34,939

the moderator Matt Lowry who is a high

46

00:02:33,110 --> 00:02:37,239

school physics teacher and a plant-type

47

00:02:34,939 --> 00:02:40,759

physics and astronomy college professor

48

00:02:37,239 --> 00:02:42,920

joining him was myself Carly Sturgis see

49

00:02:40,759 --> 00:02:45,019

Kevin Barrett a writer and biological

50

00:02:42,919 --> 00:02:47,030

anthropologist Martin good stock of

51

00:02:45,019 --> 00:02:48,799

Griffith University and author of the

52

00:02:47,030 --> 00:02:51,009

forthcoming book beyond belief

53

00:02:48,799 --> 00:02:53,840

skepticism science and the paranormal

54

00:02:51,009 --> 00:02:55,638

Barbra Drescher a cognitive psychologist

55

00:02:53,840 --> 00:02:57,950

and lecturer a california state

56

00:02:55,639 --> 00:03:00,709

university northridge and our guest of

57

00:02:57,949 --> 00:03:03,169

honor dr. Eugenie Scott of the National

58
00:03:00,709 --> 00:03:04,819
Center for Science Education you'll be

59
00:03:03,169 --> 00:03:07,068
hearing us discuss our experiences with

60
00:03:04,818 --> 00:03:09,048
creationists and how to effectively

61
00:03:07,068 --> 00:03:11,268
counter their pseudo-scientific nonsense

62
00:03:09,049 --> 00:03:17,540
whilst also promoting good science

63
00:03:11,269 --> 00:03:19,459
education as moderator I just want to

64
00:03:17,539 --> 00:03:20,659
I've got a little list of questions are

65
00:03:19,459 --> 00:03:21,949
made with you just kind of take them in

66
00:03:20,659 --> 00:03:24,859
turn but we can also be sort of

67
00:03:21,949 --> 00:03:27,260
free-flowing and what not here much of

68
00:03:24,859 --> 00:03:30,560
the time I think we've all experienced

69
00:03:27,259 --> 00:03:32,418
that the the whole question and this is

70
00:03:30,560 --> 00:03:36,199
kind of a biggie to start with so many

71
00:03:32,419 --> 00:03:38,239
we can chew on us for a little bit the

72
00:03:36,199 --> 00:03:41,449
whole question of creationism evolution

73
00:03:38,239 --> 00:03:44,719
so on you'll hear it framed by at least

74
00:03:41,449 --> 00:03:46,340
creationists in the United States and on

75
00:03:44,719 --> 00:03:50,150
about other countries but you'll hear

76
00:03:46,340 --> 00:03:53,539
framed as as you know evolution is

77
00:03:50,150 --> 00:03:55,489
anti-god and which is anti religion and

78
00:03:53,539 --> 00:03:57,828
and and and you know you'll sometimes

79
00:03:55,489 --> 00:03:59,329
get people sort of on the other side to

80
00:03:57,829 --> 00:04:00,769
that also like maybe Richard Dawkins and

81
00:03:59,329 --> 00:04:04,069
also kind of 10 a look at it in that

82
00:04:00,769 --> 00:04:09,169
sense but you know on the probe science

83
00:04:04,068 --> 00:04:13,219
site so especially in a country that is

84
00:04:09,169 --> 00:04:15,350
as religious as the United States

85
00:04:13,219 --> 00:04:17,569
this for some people is kind of a

86

00:04:15,349 --> 00:04:19,540
powerful argument that I think drives

87
00:04:17,569 --> 00:04:22,040
them away from science or away from

88
00:04:19,540 --> 00:04:23,629
expecting evolution and I just wanted to

89
00:04:22,040 --> 00:04:26,300
get the panel's thoughts on that

90
00:04:23,629 --> 00:04:28,610
particular point okay well i'll start

91
00:04:26,300 --> 00:04:30,920
off and dr. scott knows far more about

92
00:04:28,610 --> 00:04:34,250
this area than i do so if she said I'm

93
00:04:30,920 --> 00:04:36,290
wrong than believe or not me okay the

94
00:04:34,250 --> 00:04:38,540
first point I'd make is that if you say

95
00:04:36,290 --> 00:04:40,580
that evolution is empty god it depends

96
00:04:38,540 --> 00:04:43,640
on your definition of God and it depends

97
00:04:40,579 --> 00:04:45,019
what you think God is doing now there is

98
00:04:43,639 --> 00:04:47,389
a British scientist called Dennis

99
00:04:45,019 --> 00:04:49,399
Alexander he works on top scientific

100
00:04:47,389 --> 00:04:51,500

establishment and he is a devoted

101

00:04:49,399 --> 00:04:55,489

Christian he believes that the Bible is

102

00:04:51,500 --> 00:04:58,009

the Word of God but for him God is

103

00:04:55,490 --> 00:05:00,710

constantly responsible for maintaining

104

00:04:58,009 --> 00:05:04,399

all aspects of the universe so equals

105

00:05:00,709 --> 00:05:06,799

mc-squared that God if DNA has a double

106

00:05:04,399 --> 00:05:09,500

helix God is actively maintaining all

107

00:05:06,800 --> 00:05:11,329

scientific processes all the time now

108

00:05:09,500 --> 00:05:14,089

therefore from Alexander's point of view

109

00:05:11,329 --> 00:05:17,089

evolution is one of the processes by

110

00:05:14,089 --> 00:05:18,799

which God is working in our universe and

111

00:05:17,089 --> 00:05:21,229

therefore from that viewpoint no

112

00:05:18,800 --> 00:05:23,449

evolution cannot possibly be auntie God

113

00:05:21,230 --> 00:05:25,970

because it is actually a design process

114

00:05:23,449 --> 00:05:27,529

now more generators a misunderstanding

115
00:05:25,970 --> 00:05:29,840
of science here science generally

116
00:05:27,529 --> 00:05:31,728
speaking is at this worldly process

117
00:05:29,839 --> 00:05:33,949
scientists are trying to understand how

118
00:05:31,728 --> 00:05:35,288
this world works in terms of the

119
00:05:33,949 --> 00:05:37,389
processes which go on

120
00:05:35,288 --> 00:05:40,028
in this world because you can't

121
00:05:37,389 --> 00:05:41,918
understand the dog by definition you

122
00:05:40,028 --> 00:05:44,110
cannot simply read the mind of God and

123
00:05:41,918 --> 00:05:46,658
then do a science of how God is going to

124
00:05:44,110 --> 00:05:49,059
be in the world therefore Sciences human

125
00:05:46,658 --> 00:05:51,968
process consumer working out how this

126
00:05:49,059 --> 00:05:54,369
universe works and therefore again for

127
00:05:51,968 --> 00:05:57,728
that reason science cannot be anti-god

128
00:05:54,369 --> 00:06:01,149
either I think there's a there's another

129
00:05:57,728 --> 00:06:03,728
thing going on not just with the concept

130
00:06:01,149 --> 00:06:08,050
of you know how you define God but also

131
00:06:03,728 --> 00:06:10,538
a lot of my students when they do

132
00:06:08,050 --> 00:06:12,908
respond with this is why I don't believe

133
00:06:10,538 --> 00:06:14,468
in evolution they tell me I don't

134
00:06:12,908 --> 00:06:17,438
believe in evolution because I believe

135
00:06:14,468 --> 00:06:18,939
that God created life and that's a

136
00:06:17,439 --> 00:06:21,399
fundamental misunderstanding of what

137
00:06:18,939 --> 00:06:23,199
evolution is so the rejecting a theory

138
00:06:21,399 --> 00:06:25,119
they don't actually understand the

139
00:06:23,199 --> 00:06:28,028
rejecting something other than the

140
00:06:25,119 --> 00:06:29,169
theory itself so I think there's two two

141
00:06:28,028 --> 00:06:31,959
things going on there's a

142
00:06:29,168 --> 00:06:33,430
misunderstanding of evolution and first

143

00:06:31,959 --> 00:06:35,139
they have to understand that before they

144
00:06:33,430 --> 00:06:38,800
can really think about does that

145
00:06:35,139 --> 00:06:41,379
conflict with my beliefs actually I'm at

146
00:06:38,800 --> 00:06:43,538
five thirty years of work for the next 5

147
00:06:41,379 --> 00:06:49,199
30 i'll be giving a talk on intelligent

148
00:06:43,538 --> 00:06:49,199
design and is it science no

149
00:06:49,500 --> 00:06:56,649
for more details go to dr. Scott's call

150
00:06:52,209 --> 00:07:00,009
the talk will be longer that's that's

151
00:06:56,649 --> 00:07:01,959
that's the abstract but the first I'm

152
00:07:00,009 --> 00:07:03,579
the first half of the lecture about is

153
00:07:01,959 --> 00:07:06,039
going to be about the nature of science

154
00:07:03,579 --> 00:07:08,019
you know what is science is a no as a

155
00:07:06,040 --> 00:07:10,629
way of knowing science as an

156
00:07:08,019 --> 00:07:14,109
epistemology t is the big words and

157
00:07:10,629 --> 00:07:15,790

basically it's just like this I think

158

00:07:14,110 --> 00:07:17,590

we're probably all in agreement of your

159

00:07:15,790 --> 00:07:19,930

science is a way of understanding the

160

00:07:17,589 --> 00:07:21,789

natural world and there is something

161

00:07:19,930 --> 00:07:24,069

called methodological naturalism which

162

00:07:21,790 --> 00:07:26,200

means that we restrict ourselves when we

163

00:07:24,069 --> 00:07:29,199

were in our scientists at to explain

164

00:07:26,199 --> 00:07:31,420

through natural causes the reason why we

165

00:07:29,199 --> 00:07:32,949

restrict ourselves to natural causes is

166

00:07:31,420 --> 00:07:35,680

because those are the kinds we can test

167

00:07:32,949 --> 00:07:37,539

and science fundamentally is all about

168

00:07:35,680 --> 00:07:39,850

testing your explanation that's what

169

00:07:37,540 --> 00:07:42,580

makes it such a wonderful way of knowing

170

00:07:39,850 --> 00:07:45,310

it gives us more reliable information

171

00:07:42,579 --> 00:07:47,379

than any other Vista knowledge okay so

172
00:07:45,310 --> 00:07:50,050
it's about testing explanations about

173
00:07:47,379 --> 00:07:52,360
the natural world but how do we test an

174
00:07:50,050 --> 00:07:54,370
explanation well we hold constant

175
00:07:52,360 --> 00:07:56,290
certain variables we all kind of it I'm

176
00:07:54,370 --> 00:07:57,759
going really fast here but you've I in

177
00:07:56,290 --> 00:08:00,580
seventh grade science so you understand

178
00:07:57,759 --> 00:08:04,418
this you hold constant certain variables

179
00:08:00,579 --> 00:08:07,149
this is why we can't let supernatural

180
00:08:04,418 --> 00:08:10,418
explanations into science and still call

181
00:08:07,149 --> 00:08:13,929
it science you cannot hold constant

182
00:08:10,418 --> 00:08:15,819
God's efforts God is omnipotent God can

183
00:08:13,930 --> 00:08:17,800
stay on the test tube or not going the

184
00:08:15,819 --> 00:08:20,319
test strip at all I mean you can't put

185
00:08:17,800 --> 00:08:22,629
God in the testing so you just set that

186
00:08:20,319 --> 00:08:24,689
aside when you're explaining something

187
00:08:22,629 --> 00:08:27,310
we restrict ourselves to natural causes

188
00:08:24,689 --> 00:08:30,639
because those are the only kind of test

189
00:08:27,310 --> 00:08:33,309
and so for that reason we use naturalism

190
00:08:30,639 --> 00:08:34,840
as a methodology and I think every

191
00:08:33,309 --> 00:08:36,549
scientist understands that and every

192
00:08:34,840 --> 00:08:40,780
scientist does that whether they are

193
00:08:36,549 --> 00:08:43,269
believers and unbelievers Gregor Mendel

194
00:08:40,779 --> 00:08:45,549
was a theist obviously but he was also a

195
00:08:43,269 --> 00:08:48,189
methodological naturalist he came up

196
00:08:45,549 --> 00:08:50,559
with his rules of genetics solely by

197
00:08:48,190 --> 00:08:53,290
using natural causes he didn't bring him

198
00:08:50,559 --> 00:08:56,439
down at all we criticize the intelligent

199
00:08:53,289 --> 00:09:00,459
design and creationist proponents for

200

00:08:56,440 --> 00:09:03,010
trying to bring God and decides because

201
00:09:00,460 --> 00:09:05,680
obviously you can't use god as an

202
00:09:03,009 --> 00:09:08,409
explaining as an explanation and still

203
00:09:05,679 --> 00:09:10,089
call it science because can't tesco what

204
00:09:08,409 --> 00:09:14,589
that means is there's a flip side and

205
00:09:10,090 --> 00:09:18,580
the flip side is that you also can't say

206
00:09:14,590 --> 00:09:20,980
science proves God doesn't exist for the

207
00:09:18,580 --> 00:09:24,430
same reason that you can't use God

208
00:09:20,980 --> 00:09:26,560
insights God is omnipotent you cannot

209
00:09:24,429 --> 00:09:28,059
control God's actions you cannot test

210
00:09:26,559 --> 00:09:30,039
the statements having to do with God you

211
00:09:28,059 --> 00:09:33,399
have to descend on the side that doesn't

212
00:09:30,039 --> 00:09:34,949
mean Sciences anti-god any more than

213
00:09:33,399 --> 00:09:42,179
long division wasn't

214
00:09:34,950 --> 00:09:44,790

I don't want to come so much of

215

00:09:42,179 --> 00:09:47,129

mathematics I where I praying sword I

216

00:09:44,789 --> 00:09:50,159

would pray a lot but never you you you

217

00:09:47,129 --> 00:09:52,379

know you decide you do none too long

218

00:09:50,159 --> 00:09:54,329

division based on the natural process of

219

00:09:52,379 --> 00:09:56,220

mathematics you do science based on

220

00:09:54,330 --> 00:09:58,050

natural process that doesn't make long

221

00:09:56,220 --> 00:10:00,180

division anti-religious that doesn't

222

00:09:58,049 --> 00:10:03,029

make sense interpreters very few people

223

00:10:00,179 --> 00:10:07,709

think that cell division is an anti

224

00:10:03,029 --> 00:10:10,019

religious theory but once you're talking

225

00:10:07,710 --> 00:10:11,730

about human beings once you're talking

226

00:10:10,019 --> 00:10:14,789

about living things once you're talking

227

00:10:11,730 --> 00:10:17,129

about important issues that are

228

00:10:14,789 --> 00:10:19,740

important to people that's when people

229
00:10:17,129 --> 00:10:21,990
start getting nervous about evolution as

230
00:10:19,740 --> 00:10:23,639
a sense and I think one of the ways that

231
00:10:21,990 --> 00:10:25,769
we need to cope with this is be very

232
00:10:23,639 --> 00:10:29,220
clear about what science is and what it

233
00:10:25,769 --> 00:10:31,740
isn't science is a way of knowing about

234
00:10:29,220 --> 00:10:33,269
the natural world and we have to

235
00:10:31,740 --> 00:10:34,649
restrict ourselves to natural causes

236
00:10:33,269 --> 00:10:36,090
because those are the only ones who can

237
00:10:34,649 --> 00:10:38,429
test that's kind of the map will be

238
00:10:36,090 --> 00:10:39,769
limited across the room it doesn't mean

239
00:10:38,429 --> 00:10:42,738
that all scientist area

240
00:10:39,769 --> 00:10:46,220
Master building but it does mean that

241
00:10:42,739 --> 00:10:47,989
science is a limited with we often don't

242
00:10:46,220 --> 00:10:50,089
think of science as a limited way of

243
00:10:47,989 --> 00:10:51,980
life and it's sort of this this head

244
00:10:50,089 --> 00:10:54,230
robotic presentation of science that

245
00:10:51,980 --> 00:10:57,079
makes many conservative religious people

246
00:10:54,230 --> 00:10:58,759
very nervous about science and they

247
00:10:57,078 --> 00:11:00,109
believe that the state the next

248
00:10:58,759 --> 00:11:01,699
statement to come out is that well

249
00:11:00,110 --> 00:11:05,329
therefore take your garden Charlotte and

250
00:11:01,698 --> 00:11:07,998
that's not my sinuses one of the main

251
00:11:05,328 --> 00:11:09,558
problems that we have in which has been

252
00:11:07,999 --> 00:11:11,389
echoed by my colleagues that we with the

253
00:11:09,558 --> 00:11:14,588
creation and evolution issue is that

254
00:11:11,389 --> 00:11:17,360
many non-scientists in the community

255
00:11:14,589 --> 00:11:19,279
believe that they have to choose between

256
00:11:17,360 --> 00:11:21,678
science and religion if they really

257

00:11:19,278 --> 00:11:24,198
understand what science is and what it

258
00:11:21,678 --> 00:11:25,850
is great for and its limitations that is

259
00:11:24,198 --> 00:11:27,378
not a necessary conclusion to come to

260
00:11:25,850 --> 00:11:29,749
and I think they'll all be a lot more

261
00:11:27,379 --> 00:11:31,909
relaxed about about the teaching of

262
00:11:29,749 --> 00:11:34,790
evolution their kids that's that's a

263
00:11:31,909 --> 00:11:36,528
great point no I just want to share a

264
00:11:34,789 --> 00:11:40,308
quick anecdote about how I deal with

265
00:11:36,528 --> 00:11:42,558
this in my classroom as as a physics

266
00:11:40,308 --> 00:11:45,618
teacher because when I teach physics I

267
00:11:42,558 --> 00:11:47,889
always go into cosmology the big bang

268
00:11:45,619 --> 00:11:51,259
and so on and just so everybody knows if

269
00:11:47,889 --> 00:11:53,778
you think that creationists only go

270
00:11:51,259 --> 00:11:57,110
after biological evolution think again

271
00:11:53,778 --> 00:11:58,869

okay they they are targeting all a lot

272

00:11:57,110 --> 00:12:02,329

of different areas of science in general

273

00:11:58,869 --> 00:12:05,360

cosmology geology they're now starting

274

00:12:02,328 --> 00:12:08,838

to go after neuroscience so it's not

275

00:12:05,360 --> 00:12:11,808

just talking about no for you know ninth

276

00:12:08,839 --> 00:12:13,850

grade biology but the way I deal with

277

00:12:11,808 --> 00:12:15,798

this my classroom is I just I tackled

278

00:12:13,850 --> 00:12:19,040

right up front that's one of the reasons

279

00:12:15,798 --> 00:12:20,149

I made the first questioner I go into my

280

00:12:19,039 --> 00:12:21,889

students and I say look you know we're

281

00:12:20,149 --> 00:12:25,789

going to talk about Big Bang cosmology

282

00:12:21,889 --> 00:12:26,778

cosmic evolution someone I said but this

283

00:12:25,789 --> 00:12:28,639

do you guys got to remember this is a

284

00:12:26,778 --> 00:12:29,899

science classroom here right we're not

285

00:12:28,639 --> 00:12:31,789

talking theology we're not talking

286

00:12:29,899 --> 00:12:34,190

philosophy I you know

287

00:12:31,789 --> 00:12:35,629

you want to get into all of that stuff

288

00:12:34,190 --> 00:12:40,040

you got to take a different course down

289

00:12:35,629 --> 00:12:42,439

the hall and I said and some of you it I

290

00:12:40,039 --> 00:12:44,629

will be explaining the the most current

291

00:12:42,440 --> 00:12:47,810

and best science we have and some of you

292

00:12:44,629 --> 00:12:49,519

may have an internal conflict with your

293

00:12:47,809 --> 00:12:52,399

particular religious or philosophical

294

00:12:49,519 --> 00:12:55,399

beliefs and then I put the onus on the

295

00:12:52,399 --> 00:12:57,980

student because what i say as i say if

296

00:12:55,399 --> 00:13:01,220

you fall into this category if you find

297

00:12:57,980 --> 00:13:02,840

that you have a problem reconciling your

298

00:13:01,220 --> 00:13:06,019

religious beliefs with the science i'm

299

00:13:02,840 --> 00:13:08,930

teaching i leave that up to you to

300
00:13:06,019 --> 00:13:10,730
reconcile well i'm going to assume that

301
00:13:08,929 --> 00:13:12,829
you are a mature enough person that you

302
00:13:10,730 --> 00:13:14,509
can figure it out for yourself because

303
00:13:12,830 --> 00:13:16,730
it's not up to me to tell you what to

304
00:13:14,509 --> 00:13:18,139
movie or not believe about God something

305
00:13:16,730 --> 00:13:19,670
to be to teach you science and that's my

306
00:13:18,139 --> 00:13:23,409
job that's the way I handle it for

307
00:13:19,669 --> 00:13:25,759
whatever it's worth um any other

308
00:13:23,409 --> 00:13:28,120
comments or questions on this particular

309
00:13:25,759 --> 00:13:30,889
point I throw in a little bit sure oh

310
00:13:28,120 --> 00:13:33,080
you know I ended Pierce mean I teach

311
00:13:30,889 --> 00:13:34,309
biological anthropology so not only am I

312
00:13:33,080 --> 00:13:36,290
going to ask people to believe in

313
00:13:34,309 --> 00:13:37,879
evolution I'm also going to ask them to

314

00:13:36,289 --> 00:13:41,059
believe that they have a common ancestor

315
00:13:37,879 --> 00:13:42,320
with you know monkeys and apes and that

316
00:13:41,059 --> 00:13:44,059
over the course of the last six or so

317
00:13:42,320 --> 00:13:45,680
million years we have evolved from a

318
00:13:44,059 --> 00:13:48,529
primitive state to a slightly more

319
00:13:45,679 --> 00:13:49,939
dancing it appears to me after teaching

320
00:13:48,529 --> 00:13:52,029
this for a number of years that this is

321
00:13:49,940 --> 00:13:54,560
much more cultural than it is

322
00:13:52,029 --> 00:13:56,120
histological I think that a scientist we

323
00:13:54,559 --> 00:13:57,439
approach these things as mr. balaji

324
00:13:56,120 --> 00:13:59,629
trying to understand what the nature of

325
00:13:57,440 --> 00:14:00,830
knowledge actually is butta most of our

326
00:13:59,629 --> 00:14:03,470
students are approaching this as a

327
00:14:00,830 --> 00:14:05,300
conflict of culture and your culture is

328
00:14:03,470 --> 00:14:07,399

a set of values and beliefs that you get

329

00:14:05,299 --> 00:14:09,319

is sort of a unit and you're not just

330

00:14:07,399 --> 00:14:11,509

unable to go ahead and pick and choose

331

00:14:09,320 --> 00:14:14,420

what aspects of those culture you can

332

00:14:11,509 --> 00:14:15,500

accept and not accept so in a way it's

333

00:14:14,419 --> 00:14:17,269

that sort of baby with the bathwater

334

00:14:15,500 --> 00:14:20,000

argument I think that in most cases

335

00:14:17,269 --> 00:14:22,549

people are feeling like they're put to

336

00:14:20,000 --> 00:14:25,490

the point of either accepting everything

337

00:14:22,549 --> 00:14:26,719

that I have to say or none of it and as

338

00:14:25,490 --> 00:14:28,879

I think most people here would agree

339

00:14:26,720 --> 00:14:32,000

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

340

00:14:28,879 --> 00:14:33,149

of a state of affairs just a quick point

341

00:14:32,000 --> 00:14:34,649

of order on if you do

342

00:14:33,149 --> 00:14:36,179

question what's and let's belong to them

343
00:14:34,649 --> 00:14:39,269
for a little bit because we will ever do

344
00:14:36,179 --> 00:14:43,949
a nice at the entrance I have something

345
00:14:39,269 --> 00:14:46,590
really important okay I'm taking risk

346
00:14:43,950 --> 00:14:48,120
and doing this but I'm hoping that this

347
00:14:46,590 --> 00:14:51,269
is a friendly audience and they were

348
00:14:48,120 --> 00:14:53,070
serving more than us on my side I may be

349
00:14:51,269 --> 00:14:56,340
making a big mistake this may end up on

350
00:14:53,070 --> 00:15:02,430
YouTube tomorrow I don't believe in

351
00:14:56,340 --> 00:15:04,440
evolution you must set bomb the other

352
00:15:02,429 --> 00:15:06,899
should I just believe in the kinetic

353
00:15:04,440 --> 00:15:09,540
theory of matter I don't believe in cell

354
00:15:06,899 --> 00:15:11,939
division I don't believe Angela centrist

355
00:15:09,539 --> 00:15:13,730
politically I think what I do believe

356
00:15:11,940 --> 00:15:18,000
and I believe in freedom of speech I

357
00:15:13,730 --> 00:15:22,800
believe in June change of the last image

358
00:15:18,000 --> 00:15:25,769
i believe that we should do a lot of

359
00:15:22,799 --> 00:15:28,439
things to try to help our planet stay

360
00:15:25,769 --> 00:15:31,230
clean i believe that we should have

361
00:15:28,440 --> 00:15:33,210
universal health care i believe what my

362
00:15:31,230 --> 00:15:37,019
husband is the best-looking funniest and

363
00:15:33,210 --> 00:15:39,990
smartest man world but i don't believe

364
00:15:37,019 --> 00:15:43,500
in evolution i would hope you don't

365
00:15:39,990 --> 00:15:44,909
either we get out of that habit we don't

366
00:15:43,500 --> 00:15:47,009
need to include other members of society

367
00:15:44,909 --> 00:15:48,809
Givens we scientists and members of

368
00:15:47,009 --> 00:15:51,389
society so we don't talk about believing

369
00:15:48,809 --> 00:15:53,309
the kinetic theory matter but we kind of

370
00:15:51,389 --> 00:15:56,669
fall into that trap of talking about the

371

00:15:53,309 --> 00:15:58,319
b-word in connection with your try to

372
00:15:56,669 --> 00:15:59,019
break yourself of the habit of saying

373
00:15:58,320 --> 00:16:02,510
you believe in

374
00:15:59,019 --> 00:16:04,279
cuz your dogs but if people think

375
00:16:02,509 --> 00:16:07,340
evolution is a belief well then your

376
00:16:04,279 --> 00:16:09,799
belief is no better enable a very good

377
00:16:07,340 --> 00:16:12,500
verb to substitute for that is except I

378
00:16:09,799 --> 00:16:14,659
actually accept evolution because right

379
00:16:12,500 --> 00:16:16,669
now the idea that living things and

380
00:16:14,659 --> 00:16:18,829
common ancestors that's what evolution

381
00:16:16,669 --> 00:16:20,360
is the idea that living things are

382
00:16:18,830 --> 00:16:23,120
common ancestors is really the best

383
00:16:20,360 --> 00:16:25,039
explanation for fossils and the

384
00:16:23,120 --> 00:16:27,889
biochemistry and all these other kinds

385
00:16:25,039 --> 00:16:29,599

of sources of information there's not a

386

00:16:27,889 --> 00:16:31,460

belief something comes up with a better

387

00:16:29,600 --> 00:16:33,980

explanation two weeks from now that will

388

00:16:31,460 --> 00:16:37,040

be really fun I'll give us all a bunch

389

00:16:33,980 --> 00:16:38,810

of new science to do it will not tear my

390

00:16:37,039 --> 00:16:40,969

heart strings out like I'm losing my

391

00:16:38,809 --> 00:16:45,729

beliefs in the gold has been ugly no

392

00:16:40,970 --> 00:16:51,190

it's not a belief is not a belief so

393

00:16:45,730 --> 00:16:54,019

linguistics do comes does count now

394

00:16:51,190 --> 00:16:56,330

don't stop made that first statement I

395

00:16:54,019 --> 00:16:58,610

could see an absolute collective state

396

00:16:56,330 --> 00:17:00,860

in a shot over the whole room is like

397

00:16:58,610 --> 00:17:03,459

looking at a hundred and twenty statues

398

00:17:00,860 --> 00:17:05,828

for a moment I was one of them as hell

399

00:17:03,458 --> 00:17:08,359

most of us up here knew what was coming

400
00:17:05,828 --> 00:17:14,269
I guess it after a moment but being

401
00:17:08,359 --> 00:17:16,039
rather slow thinking yeah look in that

402
00:17:14,269 --> 00:17:20,349
sense sure I mean I've been called an

403
00:17:16,039 --> 00:17:22,549
evolutionist and that term is false I

404
00:17:20,349 --> 00:17:24,438
believe that if there were sufficient

405
00:17:22,549 --> 00:17:26,629
evidence against the theory of evolution

406
00:17:24,439 --> 00:17:28,610
so that if she was overthrown then I

407
00:17:26,630 --> 00:17:30,740
believe it should be thrown the help i

408
00:17:28,609 --> 00:17:33,109
do breathe that that's probably not

409
00:17:30,740 --> 00:17:34,730
going to happen because as i understand

410
00:17:33,109 --> 00:17:37,939
it from the work of scientists evidence

411
00:17:34,730 --> 00:17:40,670
is so massive that even the evolution or

412
00:17:37,940 --> 00:17:42,440
something like it is pretty well certain

413
00:17:40,670 --> 00:17:42,990
to have occurred we can say that with a

414
00:17:42,440 --> 00:17:44,880
great

415
00:17:42,990 --> 00:17:46,710
confidence but yes therefore in the

416
00:17:44,880 --> 00:17:48,420
sense of believing in the sense of what

417
00:17:46,710 --> 00:17:50,910
believes in a religion in a religious

418
00:17:48,420 --> 00:17:52,529
pay for believing in an ism yeah that's

419
00:17:50,910 --> 00:17:54,269
right we don't regard even if you nor

420
00:17:52,529 --> 00:17:56,759
any other scientific theory like that

421
00:17:54,269 --> 00:17:59,190
they are in fact established scientific

422
00:17:56,759 --> 00:18:01,609
theories exclamations of the universe

423
00:17:59,190 --> 00:18:04,890
and generally speaking it is about

424
00:18:01,609 --> 00:18:07,469
generalization whenever science has

425
00:18:04,890 --> 00:18:09,059
concluded that a theory explains the

426
00:18:07,470 --> 00:18:11,460
evidence and should be accepted as the

427
00:18:09,058 --> 00:18:13,019
only explanation the rest of us I mean

428

00:18:11,460 --> 00:18:14,429
that you would then maybe states just

429
00:18:13,019 --> 00:18:15,990
like the rest of us the rest of us can

430
00:18:14,429 --> 00:18:18,030
have a pretty fair degree of confidence

431
00:18:15,990 --> 00:18:21,569
that that very or something like it is

432
00:18:18,029 --> 00:18:23,519
something very close to the truth I just

433
00:18:21,569 --> 00:18:25,619
want to say that whenever someone asks

434
00:18:23,519 --> 00:18:27,720
me a question with that word believe and

435
00:18:25,619 --> 00:18:31,049
I just with a lot of words like this I

436
00:18:27,720 --> 00:18:34,140
always qualify it by saying if I believe

437
00:18:31,049 --> 00:18:36,419
you mean I currently hold true and then

438
00:18:34,140 --> 00:18:41,490
go from there I like that word except oh

439
00:18:36,420 --> 00:18:43,529
so much shorter yeah I actually hardly

440
00:18:41,490 --> 00:18:47,130
ever use the lib theory either you know

441
00:18:43,529 --> 00:18:48,960
because to scientist theory means

442
00:18:47,130 --> 00:18:50,820

explanation and it means the generally a

443

00:18:48,960 --> 00:18:52,440

well-founded explanation something's got

444

00:18:50,819 --> 00:18:54,990

a lot to back it up it doesn't mean

445

00:18:52,440 --> 00:18:56,759

hunch you know I have we have a booth

446

00:18:54,990 --> 00:18:58,259

over here y'all come and visit by one of

447

00:18:56,759 --> 00:18:59,429

these great t-shirts like this kind of

448

00:18:58,259 --> 00:19:05,039

friendliness near the front of

449

00:18:59,429 --> 00:19:07,470

photo/matt a wonderful I have this great

450

00:19:05,039 --> 00:19:09,269

conversation with a man who came to my

451

00:19:07,470 --> 00:19:12,000

booth and he said well you know we saw

452

00:19:09,269 --> 00:19:14,759

this evolution stuff on the table and

453

00:19:12,000 --> 00:19:16,470

you said well you know I don't know I

454

00:19:14,759 --> 00:19:17,970

think there'd be a lot fewer problems if

455

00:19:16,470 --> 00:19:21,808

they just taught evolution is a theory

456

00:19:17,970 --> 00:19:26,450

rather than effect so this is a teaching

457
00:19:21,808 --> 00:19:29,490
moment right that's not going to do it

458
00:19:26,450 --> 00:19:30,990
this is a teachable moment sorry you

459
00:19:29,490 --> 00:19:32,819
know what do you invite theory and of

460
00:19:30,990 --> 00:19:34,710
course way to met my theory was guess or

461
00:19:32,819 --> 00:19:36,509
how to something that was not really and

462
00:19:34,710 --> 00:19:40,710
so you know we talked a little bit more

463
00:19:36,509 --> 00:19:43,049
about how one of the things that I tell

464
00:19:40,710 --> 00:19:45,000
science teachers to do when parents or

465
00:19:43,049 --> 00:19:46,980
students say well the revolution is just

466
00:19:45,000 --> 00:19:50,190
theory it's not know scientists are

467
00:19:46,980 --> 00:19:52,710
giving up on evolution x / games that's

468
00:19:50,190 --> 00:19:54,630
out there so well send that student to

469
00:19:52,710 --> 00:19:56,279
your local community college economist

470
00:19:54,630 --> 00:19:58,110
library just have them pick up a half a

471
00:19:56,279 --> 00:20:00,359
dozen journals or something flip through

472
00:19:58,109 --> 00:20:02,849
the contents and see if there's any

473
00:20:00,359 --> 00:20:05,849
article in any of those general science

474
00:20:02,849 --> 00:20:09,829
or nature cell see if there's any

475
00:20:05,849 --> 00:20:12,629
article in any of those journals that

476
00:20:09,829 --> 00:20:14,460
questions whether evolution to place

477
00:20:12,630 --> 00:20:16,800
questions whether living things that

478
00:20:14,460 --> 00:20:18,509
come in ancestors what you will find is

479
00:20:16,799 --> 00:20:21,149
a lot of research going on about the

480
00:20:18,509 --> 00:20:23,099
details about the tree of life about

481
00:20:21,150 --> 00:20:26,460
mechanisms of change you find a lot of

482
00:20:23,099 --> 00:20:28,589
science going on about the details let

483
00:20:26,460 --> 00:20:30,058
me know if you find anything any article

484
00:20:28,589 --> 00:20:31,859
saying well you know maybe living things

485

00:20:30,058 --> 00:20:33,240
didn't have common answers see if

486
00:20:31,859 --> 00:20:34,979
there's anything like that and of course

487
00:20:33,240 --> 00:20:36,690
the kids actually aren't going to do it

488
00:20:34,980 --> 00:20:37,558
but they feel that if they did there

489
00:20:36,690 --> 00:20:40,710
they're going to believe the teacher

490
00:20:37,558 --> 00:20:42,089
more now but yeah if a student does this

491
00:20:40,710 --> 00:20:44,279
the student is not going to find that

492
00:20:42,089 --> 00:20:46,500
evolution is the shaking is an incident

493
00:20:44,279 --> 00:20:48,259
which is a very useful thing for

494
00:20:46,500 --> 00:20:51,269
students to know

495
00:20:48,259 --> 00:20:53,759
okay when I kind of keep things we're

496
00:20:51,269 --> 00:20:55,618
going to launder but a couple of other

497
00:20:53,759 --> 00:20:57,929
things to get at because I one of the

498
00:20:55,618 --> 00:20:59,428
things i want to do is get to sort of a

499
00:20:57,929 --> 00:21:01,169

pragmatic angle how do you how do you

500

00:20:59,429 --> 00:21:03,929

deal with this if you're a teacher or if

501

00:21:01,169 --> 00:21:06,949

you're a parent and how do you advocate

502

00:21:03,929 --> 00:21:11,038

for good science but and against this

503

00:21:06,949 --> 00:21:12,149

anti-scientific stuff but one thing I

504

00:21:11,038 --> 00:21:14,848

think it's very important for people

505

00:21:12,148 --> 00:21:17,878

understand is that and this became very

506

00:21:14,848 --> 00:21:22,108

clear to me from an article that about

507

00:21:17,878 --> 00:21:24,898

dr. Scott road years ago there are many

508

00:21:22,108 --> 00:21:35,398

different kinds thank you my uncle's

509

00:21:24,898 --> 00:21:36,628

here he did it Jeanne Jeanne Jeanne

510

00:21:35,398 --> 00:21:37,948

wrote this great article and she really

511

00:21:36,628 --> 00:21:40,019

it really drives well there are many

512

00:21:37,949 --> 00:21:43,139

different versions and forms of

513

00:21:40,019 --> 00:21:45,318

creationism I think maybe we make a

514
00:21:43,138 --> 00:21:48,718
mistake on our side sometimes by

515
00:21:45,318 --> 00:21:50,759
painting with too broad a brush because

516
00:21:48,719 --> 00:21:54,599
there really are differences within the

517
00:21:50,759 --> 00:21:57,838
creationist movement and they can really

518
00:21:54,598 --> 00:21:59,878
disagree on a lot of things and so this

519
00:21:57,838 --> 00:22:02,009
is an important thing to know too so

520
00:21:59,878 --> 00:22:03,269
let's maybe throw it out there for a few

521
00:22:02,009 --> 00:22:08,028
minutes of discussion and then we'll get

522
00:22:03,269 --> 00:22:08,028
on to some other pragmatic things

523
00:22:10,750 --> 00:22:17,859
utterly anybody okay I'll sorry that

524
00:22:15,130 --> 00:22:23,530
hurt actually okay well I'll give you

525
00:22:17,859 --> 00:22:27,279
one example for example you you often

526
00:22:23,529 --> 00:22:29,589
hear creationists make the argument for

527
00:22:27,279 --> 00:22:31,389
example that we should teach all views

528

00:22:29,589 --> 00:22:34,539
can we should teach all views in

529

00:22:31,390 --> 00:22:37,090
classroom the escalate don't actually

530

00:22:34,539 --> 00:22:39,099
did oh yeah when they say we should

531

00:22:37,089 --> 00:22:40,689
teach all views it's kind of like it's

532

00:22:39,099 --> 00:22:42,579
kind of slimy maneuver because they're

533

00:22:40,690 --> 00:22:44,259
not really meeting all views because

534

00:22:42,579 --> 00:22:45,879
then you can counter the argument saying

535

00:22:44,259 --> 00:22:49,629
oh well should we church teach the

536

00:22:45,880 --> 00:22:51,190
Muslim version of creations in at this

537

00:22:49,630 --> 00:22:55,780
particular country that's really not a

538

00:22:51,190 --> 00:22:59,259
popular option among Christians yeah and

539

00:22:55,779 --> 00:23:00,430
so there's that angle right then the

540

00:22:59,259 --> 00:23:03,759
audience about the flying spaghetti

541

00:23:00,430 --> 00:23:06,789
monster but the sticking with just

542

00:23:03,759 --> 00:23:08,589
creationism I mean I've seen many

543
00:23:06,789 --> 00:23:11,289
different styles of creations such as

544
00:23:08,589 --> 00:23:14,230
you know you have the did what many of

545
00:23:11,289 --> 00:23:16,539
us think of as the biblically literal

546
00:23:14,230 --> 00:23:19,299
fundamentalist creations these are the

547
00:23:16,539 --> 00:23:21,879
young earth creationists ye cease then

548
00:23:19,299 --> 00:23:23,889
you have the old earth creationist these

549
00:23:21,880 --> 00:23:25,330
are people who accept that the earth is

550
00:23:23,890 --> 00:23:27,759
four-and-a-half billion years old or

551
00:23:25,329 --> 00:23:31,210
that the universe is 13.7 billion years

552
00:23:27,759 --> 00:23:33,099
old at hugh Ross is a good example of

553
00:23:31,210 --> 00:23:35,170
this he's a great example of an older is

554
00:23:33,099 --> 00:23:37,349
gracious because he believes in all of

555
00:23:35,170 --> 00:23:41,710
the cosmology and accepts all of that

556
00:23:37,349 --> 00:23:45,849

but doesn't accept biological evolution

557

00:23:41,710 --> 00:23:47,170

okay and you have people everywhere in

558

00:23:45,849 --> 00:23:52,079

between and then you also have folks

559

00:23:47,170 --> 00:23:54,640

that go into this this idea that okay

560

00:23:52,079 --> 00:23:56,529

you know they just want to push the

561

00:23:54,640 --> 00:23:57,700

Bible literally for one thing and then

562

00:23:56,529 --> 00:24:00,039

you have people on the other hand who

563

00:23:57,700 --> 00:24:02,610

want to try to do everything they can to

564

00:24:00,039 --> 00:24:04,920

seem like they're avoid and pushing

565

00:24:02,609 --> 00:24:06,599

religion but they really are those are

566

00:24:04,920 --> 00:24:09,660

what I call the intelligent designers

567

00:24:06,599 --> 00:24:12,029

the people of the disco institute as i

568

00:24:09,660 --> 00:24:18,480

like to call because just go as useful

569

00:24:12,029 --> 00:24:21,089

someday so so any comments in that in

570

00:24:18,480 --> 00:24:24,089

that vein well i don't know if this as

571
00:24:21,089 --> 00:24:27,359
much use but i know that in my state the

572
00:24:24,089 --> 00:24:29,548
gravity center of Virginia which is a an

573
00:24:27,359 --> 00:24:31,289
educational center it is run by

574
00:24:29,548 --> 00:24:35,039
scientists in one way that they decided

575
00:24:31,289 --> 00:24:37,859
to sort of thumb their nose at the

576
00:24:35,039 --> 00:24:39,690
notion that you know all theories or

577
00:24:37,859 --> 00:24:41,969
more accurately two theories should be

578
00:24:39,690 --> 00:24:44,850
promoted was that they created a large

579
00:24:41,970 --> 00:24:47,039
Norwich had seven different theories of

580
00:24:44,849 --> 00:24:49,949
how the universe began including on how

581
00:24:47,039 --> 00:24:53,159
the local aboriginal population believes

582
00:24:49,950 --> 00:24:54,660
that their world was created and often I

583
00:24:53,160 --> 00:24:56,820
try to point that out as an example

584
00:24:54,660 --> 00:24:58,860
power right fine let's have the more

585
00:24:56,819 --> 00:25:00,329
it's quite a beautiful piece I'm hoping

586
00:24:58,859 --> 00:25:02,428
to see Micah need to be the people up

587
00:25:00,329 --> 00:25:05,279
there about what led them to take this

588
00:25:02,429 --> 00:25:08,070
stance and what was the reaction by the

589
00:25:05,279 --> 00:25:10,079
local what we might think of as standard

590
00:25:08,069 --> 00:25:12,389
creationists to that effort it was sort

591
00:25:10,079 --> 00:25:22,099
of more like I don't know this again so

592
00:25:12,390 --> 00:25:24,179
yeah yeah for you just might even fold

593
00:25:22,099 --> 00:25:26,069
you know you know it's really

594
00:25:24,179 --> 00:25:29,190
interesting i don't know if any of you

595
00:25:26,069 --> 00:25:31,798
have watched penn teller's show on

596
00:25:29,190 --> 00:25:34,740
showtime calm you know the children

597
00:25:31,798 --> 00:25:36,210
mailers has soap yes but they did this

598
00:25:34,740 --> 00:25:38,329
excellent in their first season they did

599

00:25:36,210 --> 00:25:42,870
this excellent a piece where they had

600
00:25:38,329 --> 00:25:44,579
genie on and and they talked about

601
00:25:42,869 --> 00:25:45,989
creationism and and they made this

602
00:25:44,579 --> 00:25:48,928
excellent little skit they were talking

603
00:25:45,990 --> 00:25:50,799
about the Raelians ok now for those of

604
00:25:48,929 --> 00:25:54,100
you who don't know the real

605
00:25:50,799 --> 00:25:56,139
the Raelians are ok now they're only

606
00:25:54,099 --> 00:25:58,449
about 50,000 Raelians in the Unites or

607
00:25:56,140 --> 00:26:00,700
sorry in the world I think so if I'm

608
00:25:58,450 --> 00:26:02,080
thinking on I'm pretty good ground here

609
00:26:00,700 --> 00:26:03,490
in assuming that none of them are

610
00:26:02,079 --> 00:26:07,089
present so I'm going to say this just

611
00:26:03,490 --> 00:26:10,900
like I think the Raelians are from what

612
00:26:07,089 --> 00:26:14,829
I understand it a new age atheistic UFO

613
00:26:10,900 --> 00:26:16,990

cult ok and they believe in intelligent

614

00:26:14,829 --> 00:26:19,119
design they just think that the

615

00:26:16,990 --> 00:26:22,839
intelligent designer or space aliens

616

00:26:19,119 --> 00:26:25,509
instead of God somehow the you know the

617

00:26:22,839 --> 00:26:28,000
the folks of the Discovery Institute are

618

00:26:25,509 --> 00:26:29,799
not looking too they're not yet they're

619

00:26:28,000 --> 00:26:32,470
not looking to ally themselves thrilling

620

00:26:29,799 --> 00:26:36,430
I don't know even though they advocate

621

00:26:32,470 --> 00:26:38,289
for intelligent design ok so but one

622

00:26:36,430 --> 00:26:41,080
thing that they do do at the Discovery

623

00:26:38,289 --> 00:26:43,720
Institute those they use that as a

624

00:26:41,079 --> 00:26:46,809
doorway to say oh you know this isn't

625

00:26:43,720 --> 00:26:49,319
about religion so they they don't

626

00:26:46,809 --> 00:26:51,759
exactly actively refute it either

627

00:26:49,319 --> 00:26:52,839
because that allows them to say well

628
00:26:51,759 --> 00:26:55,299
there are plenty of people to believe in

629
00:26:52,839 --> 00:26:59,859
intelligent design and they don't

630
00:26:55,299 --> 00:27:02,139
believe that it's God the ideas have

631
00:26:59,859 --> 00:27:04,689
this very interest i protect like this 5

632
00:27:02,140 --> 00:27:07,810
30 else or so let's get the talk about

633
00:27:04,690 --> 00:27:12,820
it they have this very strange way of

634
00:27:07,809 --> 00:27:15,190
looking at did they pay creationists are

635
00:27:12,819 --> 00:27:16,649
real enthusiast for dichotomized thing

636
00:27:15,190 --> 00:27:20,440
the intelligent design people

637
00:27:16,650 --> 00:27:22,450
dichotomize cause they have natural

638
00:27:20,440 --> 00:27:24,340
cause and intelligent cause those are

639
00:27:22,450 --> 00:27:26,019
the two kinds of causes they recognize

640
00:27:24,339 --> 00:27:29,079
the natural causes are the kind of stuff

641
00:27:26,019 --> 00:27:31,480
we would be familiar with us now the

642
00:27:29,079 --> 00:27:33,129
regular laws of nature fine everybody

643
00:27:31,480 --> 00:27:35,589
agrees with that over here on the

644
00:27:33,130 --> 00:27:37,990
intelligent calls column they have

645
00:27:35,589 --> 00:27:38,908
things like oh god that's when

646
00:27:37,990 --> 00:27:42,329
intelligent

647
00:27:38,909 --> 00:27:44,129
they have human beings leather type of

648
00:27:42,329 --> 00:27:47,009
intelligent cause we create things

649
00:27:44,128 --> 00:27:49,469
obviously too subtle degree there's some

650
00:27:47,009 --> 00:27:51,118
debate maybe the higher primates or

651
00:27:49,470 --> 00:27:53,700
dolphins they have intelligence of

652
00:27:51,118 --> 00:27:56,339
course space aliens I mean that's also

653
00:27:53,700 --> 00:27:59,308
over there on the on the intelligent

654
00:27:56,339 --> 00:28:02,548
cruise line but what's kind of

655
00:27:59,308 --> 00:28:05,118
intriguing here is that most of those

656

00:28:02,548 --> 00:28:07,759
commodities over there and the

657
00:28:05,118 --> 00:28:11,398
intelligent cause part of the diagram

658
00:28:07,759 --> 00:28:13,528
really are natural now human being space

659
00:28:11,398 --> 00:28:15,418
aliens are material beings as well

660
00:28:13,528 --> 00:28:17,190
higher primates dolphins all of those

661
00:28:15,419 --> 00:28:19,559
those are really natural objects they

662
00:28:17,190 --> 00:28:21,359
belong over here in natural class so

663
00:28:19,558 --> 00:28:23,569
really when you come right down to it

664
00:28:21,358 --> 00:28:25,528
the only intelligent cause that the

665
00:28:23,569 --> 00:28:29,128
intelligent design people are really

666
00:28:25,528 --> 00:28:32,548
talking about is transcendent cause it's

667
00:28:29,128 --> 00:28:36,148
got and when you really kind of nail

668
00:28:32,548 --> 00:28:39,569
them down to what kind of intelligence

669
00:28:36,148 --> 00:28:43,558
would be involved in especially creating

670
00:28:39,569 --> 00:28:47,128

the bacterial flagellum right time

671

00:28:43,558 --> 00:28:49,138

traveling biochemists perhaps as Michael

672

00:28:47,128 --> 00:28:51,509

Behe once suggested the hope not very

673

00:28:49,138 --> 00:28:54,898

seriously well no obviously not they're

674

00:28:51,509 --> 00:28:56,729

talking about that so it's it is really

675

00:28:54,898 --> 00:29:03,079

just rolling the pea under a different

676

00:28:56,729 --> 00:29:03,080

show then and this stake all science

677

00:29:05,269 --> 00:29:10,019

regarding this business there being many

678

00:29:07,679 --> 00:29:12,119

creationism I actually raised this month

679

00:29:10,019 --> 00:29:15,899

riveted creationist in Australia and

680

00:29:12,118 --> 00:29:18,058

there were the extreme young earth 6 24

681

00:29:15,898 --> 00:29:21,508

hour day creationists and the response

682

00:29:18,058 --> 00:29:24,058

was that theirs was the only true form

683

00:29:21,509 --> 00:29:25,559

of religion other religions of course

684

00:29:24,058 --> 00:29:27,240

Islam in Lewis

685
00:29:25,559 --> 00:29:30,599
is that they of course are all wrong

686
00:29:27,240 --> 00:29:33,180
they're all down furthermore anybody who

687
00:29:30,599 --> 00:29:36,019
compromises with a theistic devil its

688
00:29:33,180 --> 00:29:39,810
deadliness inspire evolutionism is

689
00:29:36,019 --> 00:29:42,210
therefore compromising with roland views

690
00:29:39,809 --> 00:29:44,669
and they are on a slippery slope which

691
00:29:42,210 --> 00:29:47,579
leads inevitably to atheism and

692
00:29:44,670 --> 00:29:50,009
damnation now that is the way that they

693
00:29:47,579 --> 00:29:52,049
see their knowing they're not the only

694
00:29:50,009 --> 00:29:53,460
kind of creation so those are fun malice

695
00:29:52,049 --> 00:29:54,899
Muslim creatures will do the same thing

696
00:29:53,460 --> 00:29:56,430
yes I'm there are a whole set of

697
00:29:54,900 --> 00:29:58,200
different kinds of fundamentalism but

698
00:29:56,430 --> 00:30:00,060
we're focus it will focus on on this

699

00:29:58,200 --> 00:30:02,730
Christian creationist one and as a

700

00:30:00,059 --> 00:30:04,200
result of that I began to see how they

701

00:30:02,730 --> 00:30:06,000
think now there may well be people in

702

00:30:04,200 --> 00:30:08,700
this room who understand this better

703

00:30:06,000 --> 00:30:12,089
than I do but the way they think is that

704

00:30:08,700 --> 00:30:15,480
their views must be held in their

705

00:30:12,089 --> 00:30:17,339
entirety or they are damned now

706

00:30:15,480 --> 00:30:19,710
therefore you can understand the kind of

707

00:30:17,339 --> 00:30:21,389
hysteria and fear that they are in when

708

00:30:19,710 --> 00:30:23,309
for example it's send their children to

709

00:30:21,390 --> 00:30:24,720
school and you know fundamentals let

710

00:30:23,309 --> 00:30:26,759
their children just so much to anybody

711

00:30:24,720 --> 00:30:28,829
else and the children come home and they

712

00:30:26,759 --> 00:30:30,329
start to talk about Old Earth and they

713

00:30:28,829 --> 00:30:32,879
start to talk about evolution and

714
00:30:30,329 --> 00:30:35,250
therefore from their perspective their

715
00:30:32,880 --> 00:30:37,620
children are damped or you can imagine

716
00:30:35,250 --> 00:30:41,099
fundamentalist teachers in school they

717
00:30:37,619 --> 00:30:42,419
must impart the true message or else the

718
00:30:41,099 --> 00:30:46,129
children that they are teaching our

719
00:30:42,420 --> 00:30:50,430
damned so they're in a kind of sustained

720
00:30:46,130 --> 00:30:52,380
state of hysteria and fear there nor was

721
00:30:50,430 --> 00:30:55,289
in the background there are the coals

722
00:30:52,380 --> 00:30:58,460
and hell as far as I can tell that's how

723
00:30:55,289 --> 00:31:11,659
they think it's such a good boy

724
00:30:58,460 --> 00:31:13,880
no I'm talking about queens laughs now

725
00:31:11,660 --> 00:31:16,160
the area thoroughly I want to get it a

726
00:31:13,880 --> 00:31:20,060
point that that was that was made here

727
00:31:16,160 --> 00:31:21,980

by a genie a moment ago and this is of

728

00:31:20,059 --> 00:31:25,480

course kind of dovetails into the next

729

00:31:21,980 --> 00:31:28,009

couple of points I wanted to tackle and

730

00:31:25,480 --> 00:31:31,039

it also don't tell sends it into what

731

00:31:28,009 --> 00:31:33,140

you just said because in my experience

732

00:31:31,039 --> 00:31:35,659

what you've got is we've got two broad

733

00:31:33,140 --> 00:31:37,550

classes of people who third form the

734

00:31:35,660 --> 00:31:38,779

creations movement in miking you've got

735

00:31:37,549 --> 00:31:39,769

what you guys you got the people who are

736

00:31:38,779 --> 00:31:41,799

true believers like what you just

737

00:31:39,769 --> 00:31:43,670

described and these are people who are

738

00:31:41,799 --> 00:31:44,720

legitimately concerned because they

739

00:31:43,670 --> 00:31:47,360

think that if their children are

740

00:31:44,720 --> 00:31:49,069

learning us they're going to help and in

741

00:31:47,359 --> 00:31:52,279

their frame okay and then you've got

742
00:31:49,069 --> 00:31:54,619
what i call the cynics I and these are

743
00:31:52,279 --> 00:31:56,149
the people who i think for lack of a

744
00:31:54,619 --> 00:31:58,009
better term run the show in places like

745
00:31:56,150 --> 00:32:00,860
the Discovery Institute because they

746
00:31:58,009 --> 00:32:03,740
know they're lying but they do it anyway

747
00:32:00,859 --> 00:32:05,240
and this goes to a point the genie just

748
00:32:03,740 --> 00:32:07,789
saying you know the people the Discovery

749
00:32:05,240 --> 00:32:09,950
Institute will say oh this this isn't

750
00:32:07,789 --> 00:32:11,359
about religion it is about God well let

751
00:32:09,950 --> 00:32:12,620
me ask you all a question how many of

752
00:32:11,359 --> 00:32:14,199
you have heard about this little thing

753
00:32:12,619 --> 00:32:16,250
released by Discovery Institute

754
00:32:14,200 --> 00:32:19,160
inadvertently in the 90s called the

755
00:32:16,250 --> 00:32:20,779
wedge document ok if you don't know

756
00:32:19,160 --> 00:32:24,050
about the wedge document and you're at

757
00:32:20,779 --> 00:32:27,529
all concerned about this topic google it

758
00:32:24,049 --> 00:32:29,119
all right because this lays bare their

759
00:32:27,529 --> 00:32:30,980
agenda I just want to be a couple of

760
00:32:29,119 --> 00:32:32,599
quotes here right we actually have

761
00:32:30,980 --> 00:32:34,509
copies in which document up here you can

762
00:32:32,599 --> 00:32:37,750
grab afterwards if you're interested

763
00:32:34,509 --> 00:32:40,240
this is not about religion

764
00:32:37,750 --> 00:32:42,039
design Theory promises to reverse the

765
00:32:40,240 --> 00:32:43,870
stifling dominance of the materialist

766
00:32:42,039 --> 00:32:46,119
world you and to replace it with a

767
00:32:43,869 --> 00:32:51,939
science consonant with Christian

768
00:32:46,119 --> 00:32:57,359
theistic convictions one of the 20 year

769
00:32:51,940 --> 00:32:57,360
goals of the Discovery Institute

770

00:32:57,849 --> 00:33:05,029
to see design Theory permeate our

771
00:33:01,299 --> 00:33:09,859
religious cultural moral and political

772
00:33:05,029 --> 00:33:12,619
life no it's not about religion you tell

773
00:33:09,859 --> 00:33:15,619
me you know I noticed something mad you

774
00:33:12,619 --> 00:33:17,569
don't have a creationist up here that

775
00:33:15,619 --> 00:33:23,539
something is kind of really lacks oh oh

776
00:33:17,569 --> 00:33:26,629
that's a good point oh okay you know you

777
00:33:23,539 --> 00:33:30,680
just presented a distortion of

778
00:33:26,630 --> 00:33:34,550
intelligent designers because obviously

779
00:33:30,680 --> 00:33:36,980
intelligent design has has philosophical

780
00:33:34,549 --> 00:33:39,109
or religious overtones but so does

781
00:33:36,980 --> 00:33:41,210
evolution I mean look at somebody like

782
00:33:39,109 --> 00:33:43,389
Gigi Simpson whippets look at somebody

783
00:33:41,210 --> 00:33:43,390
like

784
00:33:48,920 --> 00:33:55,910

it was large turn to face ball I mean

785

00:33:52,609 --> 00:33:57,829

Gigi Simpson any number of other of

786

00:33:55,910 --> 00:33:59,570

other famous paleontologists and

787

00:33:57,829 --> 00:34:04,849

evolutionary biologists have said over

788

00:33:59,569 --> 00:34:07,189

and over that that evolution is Charles

789

00:34:04,849 --> 00:34:09,679

thymine Richard Dawkins himself has said

790

00:34:07,190 --> 00:34:11,900

that evolution makes it possible to be a

791

00:34:09,679 --> 00:34:14,990

an intellectually fulfilled atheist now

792

00:34:11,900 --> 00:34:17,539

clearly if evolution has all of these

793

00:34:14,989 --> 00:34:20,089

religious implications it must be okay

794

00:34:17,539 --> 00:34:22,070

for intelligent designed to have

795

00:34:20,090 --> 00:34:24,169

religious implications nobody's saying

796

00:34:22,070 --> 00:34:26,000

that evolution is a religious just

797

00:34:24,168 --> 00:34:28,339

because there's evidence because there's

798

00:34:26,000 --> 00:34:31,250

religious implications now intelligent

799

00:34:28,340 --> 00:34:33,230

design is a solid science it's a way of

800

00:34:31,250 --> 00:34:35,210

understanding design in the natural

801

00:34:33,230 --> 00:34:37,070

world we just want intelligent design to

802

00:34:35,210 --> 00:34:38,840

be taught as a legitimate scientific

803

00:34:37,070 --> 00:34:41,240

undertaking but unfortunately we're

804

00:34:38,840 --> 00:34:43,970

being persecuted by the establishment my

805

00:34:41,239 --> 00:34:45,649

response is a fist is very pithy if

806

00:34:43,969 --> 00:34:47,029

intelligent designers of science named

807

00:34:45,650 --> 00:34:50,869

the vaccine that you made using

808

00:34:47,030 --> 00:34:52,760

intelligent design please look hard to

809

00:34:50,869 --> 00:34:55,460

come up with vaccine I mean my goodness

810

00:34:52,760 --> 00:34:58,460

the intelligent design is in its infancy

811

00:34:55,460 --> 00:35:00,440

we can't possibly be expected to come up

812

00:34:58,460 --> 00:35:04,070

with something like vaccines and weird

813
00:35:00,440 --> 00:35:08,329
we're exploring a field that integrates

814
00:35:04,070 --> 00:35:09,650
biology and informatics and statistics

815
00:35:08,329 --> 00:35:12,130
and you expect maybe this is a

816
00:35:09,650 --> 00:35:12,130
complicated

817
00:35:15,760 --> 00:35:22,720
give another nun so I just like to have

818
00:35:19,510 --> 00:35:24,970
ones back you know and I think that's

819
00:35:22,719 --> 00:35:27,909
where you're going you're eight there is

820
00:35:24,969 --> 00:35:29,559
no theory and there are no facts there

821
00:35:27,909 --> 00:35:33,399
are statements that have been made such

822
00:35:29,559 --> 00:35:37,449
as there there's irreducible complexity

823
00:35:33,400 --> 00:35:38,889
of worth which have been falsifying at

824
00:35:37,449 --> 00:35:41,609
least the evidence that they present it

825
00:35:38,889 --> 00:35:48,699
as been falsified so it hasn't produced

826
00:35:41,610 --> 00:35:51,460
anything and vaccine way we waiting far

827

00:35:48,699 --> 00:35:55,239
away from that so you actually have to

828
00:35:51,460 --> 00:35:58,599
have something to present it other than

829
00:35:55,239 --> 00:36:01,329
so I did it or I'm sorry not God did it

830
00:35:58,599 --> 00:36:03,460
an intelligent design of agents and

831
00:36:01,329 --> 00:36:06,569
intelligent agent designed it but looks

832
00:36:03,460 --> 00:36:09,309
and it's also backwards is post hoc the

833
00:36:06,570 --> 00:36:11,890
genies doing a good good job here

834
00:36:09,309 --> 00:36:13,539
langdale trafficking because this is a

835
00:36:11,889 --> 00:36:15,460
next one point because this leads right

836
00:36:13,539 --> 00:36:16,840
into the next thing and I'm taking a

837
00:36:15,460 --> 00:36:19,179
look at my watch and you can probably

838
00:36:16,840 --> 00:36:21,250
made me spend about 20 / 10 minutes on

839
00:36:19,179 --> 00:36:23,319
this next plane this is probably a very

840
00:36:21,250 --> 00:36:26,139
good place to do this now let's talk

841
00:36:23,320 --> 00:36:29,110

about the tactics that creation swings

842

00:36:26,139 --> 00:36:31,179

and how can one effectively counter

843

00:36:29,110 --> 00:36:34,210

these tactics because one thing that

844

00:36:31,179 --> 00:36:36,149

they're very good about that we all

845

00:36:34,210 --> 00:36:41,050

agree that they're lousing about science

846

00:36:36,150 --> 00:36:45,220

okay but they're very good PR very good

847

00:36:41,050 --> 00:36:48,070

at PR so how do you recognize it and how

848

00:36:45,219 --> 00:36:52,269

do you address it either as a teacher a

849

00:36:48,070 --> 00:36:54,700

student parent and advocate whatever so

850

00:36:52,269 --> 00:36:56,920

let's open it up this is one thing I've

851

00:36:54,699 --> 00:36:59,319

come across as an English teacher there

852

00:36:56,920 --> 00:37:01,690

is a popular study guide that is

853

00:36:59,320 --> 00:37:03,039

published in my state and now i believe

854

00:37:01,690 --> 00:37:05,320

it's being published in some other

855

00:37:03,039 --> 00:37:08,800

states a group called three woman and

856
00:37:05,320 --> 00:37:11,920
film and publishing what they do we is

857
00:37:08,800 --> 00:37:13,690
study notes and many quizzes for some of

858
00:37:11,920 --> 00:37:16,090
the final year's exams in high school

859
00:37:13,690 --> 00:37:18,849
and they are very neatly packaged very

860
00:37:16,090 --> 00:37:22,230
glossy and they promote creationism in

861
00:37:18,849 --> 00:37:25,539
the final pages of the book and in the

862
00:37:22,230 --> 00:37:27,969
inside cover of the book I found their

863
00:37:25,539 --> 00:37:29,650
perfect world yes whilst teaching all

864
00:37:27,969 --> 00:37:31,719
the other the study notes within our

865
00:37:29,650 --> 00:37:33,430
excellent there isn't a very good study

866
00:37:31,719 --> 00:37:36,399
guide writers but the entire thing is

867
00:37:33,429 --> 00:37:38,079
packaged with in a bit of propaganda it

868
00:37:36,400 --> 00:37:40,510
might be entertained to know that even

869
00:37:38,079 --> 00:37:43,719
the human biology study guide which

870
00:37:40,510 --> 00:37:47,530
explicitly teaches evolution is still

871
00:37:43,719 --> 00:37:49,839
packaged in creationist text and many

872
00:37:47,530 --> 00:37:52,420
schools bichri ominous study guides

873
00:37:49,840 --> 00:37:54,309
because it's nicely packaged one and it

874
00:37:52,420 --> 00:37:56,260
just pops onto the schools so pop a

875
00:37:54,309 --> 00:37:57,549
dozen schools and probably very few

876
00:37:56,260 --> 00:37:59,710
teachers pick it up flip to the back

877
00:37:57,550 --> 00:38:01,600
pages and notice that it's saying of

878
00:37:59,710 --> 00:38:03,429
course this mathematics textbook is

879
00:38:01,599 --> 00:38:05,529
demonstrating how there is indeed a

880
00:38:03,429 --> 00:38:11,259
natural order in the world and we can

881
00:38:05,530 --> 00:38:13,320
attribute that natural order to writing

882
00:38:11,260 --> 00:38:16,210
to the principal's was my strategy

883
00:38:13,320 --> 00:38:19,210
pointing it out at the English teachers

884

00:38:16,210 --> 00:38:20,530
association meeting that we had and why

885
00:38:19,210 --> 00:38:22,210
do you have to make your teachers that

886
00:38:20,530 --> 00:38:25,350
maybe you might like to try an

887
00:38:22,210 --> 00:38:31,809
alternative text I'm future Philip

888
00:38:25,349 --> 00:38:36,909
creelman see II LMA and I've written

889
00:38:31,809 --> 00:38:38,799
about it on my blog at www.calm and I

890
00:38:36,909 --> 00:38:41,259
can email you a copy I took photos

891
00:38:38,800 --> 00:38:42,940
Overson and everything was quite happy

892
00:38:41,260 --> 00:38:44,680
to go down and purchase a few copies and

893
00:38:42,940 --> 00:38:45,809
made a lot easier for me to go up to

894
00:38:44,679 --> 00:38:49,919
meeting to say

895
00:38:45,809 --> 00:38:52,680
see I h-60 Bowl I won't say another

896
00:38:49,920 --> 00:38:53,999
tactic another another tactic and

897
00:38:52,679 --> 00:38:55,739
creations will use in a good way to

898
00:38:53,998 --> 00:38:57,478

counter and this is exactly how the

899

00:38:55,739 --> 00:39:04,318

Darwins bulldogs group north of Chicago

900

00:38:57,478 --> 00:39:07,198

got started is watch watch your local

901

00:39:04,318 --> 00:39:10,170

letters to the editor right because I

902

00:39:07,199 --> 00:39:14,130

get the sense that what creationists

903

00:39:10,170 --> 00:39:15,809

will do is when they plan on moving in

904

00:39:14,130 --> 00:39:17,039

so to speak into an area to trying to

905

00:39:15,809 --> 00:39:18,749

take over in school board because this

906

00:39:17,039 --> 00:39:21,119

sort of thing almost happened where near

907

00:39:18,748 --> 00:39:23,009

where I live that they'll though I think

908

00:39:21,119 --> 00:39:25,108

what they'll do is though it looks the

909

00:39:23,009 --> 00:39:26,400

way I do is they'll grow up with these

910

00:39:25,108 --> 00:39:29,998

letters to the other and we'll see if

911

00:39:26,400 --> 00:39:31,380

they can challenge and because years ago

912

00:39:29,998 --> 00:39:33,389

there was there were all these letters

913
00:39:31,380 --> 00:39:35,430
to the editor finding suddenly popping

914
00:39:33,389 --> 00:39:38,308
up about creationism in my local paper

915
00:39:35,429 --> 00:39:40,438
and I couldn't understand it and sure

916
00:39:38,309 --> 00:39:42,689
enough a couple years after that there

917
00:39:40,438 --> 00:39:44,938
was a major push by the religious right

918
00:39:42,688 --> 00:39:48,748
to take over one of the biggest school

919
00:39:44,938 --> 00:39:50,038
districts near in the country and it was

920
00:39:48,748 --> 00:39:51,208
right near where I live and folks if

921
00:39:50,039 --> 00:39:52,469
they had been successful it would have

922
00:39:51,208 --> 00:39:56,219
been the next number i can guarantee

923
00:39:52,469 --> 00:39:58,019
that okay so what the way that Darwin's

924
00:39:56,219 --> 00:39:59,759
Bulldog has got started I personally got

925
00:39:58,018 --> 00:40:01,258
tired of seeing those creationist

926
00:39:59,759 --> 00:40:03,119
letters and nobody was countering them

927
00:40:01,259 --> 00:40:04,498
so I started talking to colleagues and

928
00:40:03,119 --> 00:40:07,528
other people and we started writing our

929
00:40:04,498 --> 00:40:09,778
letters back and now you barely see any

930
00:40:07,528 --> 00:40:12,389
creationist letters in our local paper

931
00:40:09,778 --> 00:40:13,889
anymore they lost that fight anything

932
00:40:12,389 --> 00:40:17,429
else what else you know what other

933
00:40:13,889 --> 00:40:20,728
tactics or what can we do I would I

934
00:40:17,429 --> 00:40:22,679
would strongly encourage especially

935
00:40:20,728 --> 00:40:25,768
scientists that anybody who is

936
00:40:22,679 --> 00:40:27,449
discussing this issue with someone

937
00:40:25,768 --> 00:40:30,419
especially if they're under food

938
00:40:27,449 --> 00:40:31,680
creations persuasion creationists at the

939
00:40:30,420 --> 00:40:34,559
Discovery Institute

940
00:40:31,679 --> 00:40:37,019
when dining out on scientific dogmatism

941

00:40:34,559 --> 00:40:38,760
for years they present the science

942
00:40:37,019 --> 00:40:41,369
community as dogmatic and closed-minded

943
00:40:38,760 --> 00:40:44,220
and they arguing or this link to us that

944
00:40:41,369 --> 00:40:47,010
sells very well in the United States we

945
00:40:44,219 --> 00:40:50,608
love underdogs okay they're not

946
00:40:47,010 --> 00:40:53,250
underdogs what I would encourage you to

947
00:40:50,608 --> 00:40:55,469
respond if you hear the sacrament is to

948
00:40:53,250 --> 00:40:58,289
say well actually the scientific

949
00:40:55,469 --> 00:40:59,519
community did examine their claims there

950
00:40:58,289 --> 00:41:02,099
is quite a literature out there

951
00:40:59,519 --> 00:41:04,230
discussing intelligent design or

952
00:41:02,099 --> 00:41:06,660
creation science or whatever the topic

953
00:41:04,230 --> 00:41:08,940
is there there are many books there are

954
00:41:06,659 --> 00:41:11,460
many articles much of this is online as

955
00:41:08,940 --> 00:41:13,230

well it's accessible to the public we

956

00:41:11,460 --> 00:41:15,240

didn't just look down our patrician

957

00:41:13,230 --> 00:41:17,818

scientific noses at them and dismiss

958

00:41:15,239 --> 00:41:19,529

them out of out of hand a new idea was

959

00:41:17,818 --> 00:41:21,750

presented we treated it like any other

960

00:41:19,530 --> 00:41:24,000

no idea when dem skis book came up when

961

00:41:21,750 --> 00:41:27,239

be his book came up these books were

962

00:41:24,000 --> 00:41:30,269

seriously reviewed by the scientific

963

00:41:27,239 --> 00:41:31,919

community and when the intelligent

964

00:41:30,269 --> 00:41:33,630

design people started holding these

965

00:41:31,920 --> 00:41:35,789

conferences at which they would invite

966

00:41:33,630 --> 00:41:38,460

real scientists and then they present

967

00:41:35,789 --> 00:41:40,949

the intelligent design stuff the real

968

00:41:38,460 --> 00:41:42,449

scientists would say okay here is where

969

00:41:40,949 --> 00:41:44,879

you're wrong here's where you went

970
00:41:42,449 --> 00:41:46,500
astray fix this this and this and the

971
00:41:44,880 --> 00:41:48,180
intelligent design people say thank you

972
00:41:46,500 --> 00:41:49,349
so much for coming to our conference it

973
00:41:48,179 --> 00:41:51,838
was just wonderful that we had this

974
00:41:49,349 --> 00:41:53,309
great dialogue and then two months later

975
00:41:51,838 --> 00:41:54,989
they'd have another conference and bring

976
00:41:53,309 --> 00:41:56,548
another bunch of virgin scientists and

977
00:41:54,989 --> 00:41:57,899
they'd say they'd be told the same

978
00:41:56,548 --> 00:42:01,539
things here's where you're wrong fix

979
00:41:57,900 --> 00:42:05,720
this this this and this process

980
00:42:01,539 --> 00:42:07,579
they were told over and over what the

981
00:42:05,719 --> 00:42:09,739
mistakes of intelligent design were in

982
00:42:07,579 --> 00:42:12,049
content as well as a methodology and

983
00:42:09,739 --> 00:42:14,389
they have ignored the scientific

984
00:42:12,050 --> 00:42:16,400
response this is why they are ignored by

985
00:42:14,389 --> 00:42:17,960
the scientific community but it's very

986
00:42:16,400 --> 00:42:19,450
important that the public understand

987
00:42:17,960 --> 00:42:22,519
that they weren't dismissed out of hand

988
00:42:19,449 --> 00:42:24,439
there are there are arguments and ideas

989
00:42:22,519 --> 00:42:26,360
were examined there is an extensive

990
00:42:24,440 --> 00:42:28,400
literature analyzing intelligent design

991
00:42:26,360 --> 00:42:30,320
be sure that the person who people

992
00:42:28,400 --> 00:42:31,940
you're talking with understanding they

993
00:42:30,320 --> 00:42:35,390
still aren't either there there's the

994
00:42:31,940 --> 00:42:37,490
There forms where you know people will

995
00:42:35,389 --> 00:42:39,319
debate them seriously michael shermer

996
00:42:37,489 --> 00:42:43,069
does that once in a while with hugh Ross

997
00:42:39,320 --> 00:42:45,380
and so forth and it's interesting to

998

00:42:43,070 --> 00:42:49,910
watch but we started have debates look

999
00:42:45,380 --> 00:42:52,250
at that okay I can just compare with

1000
00:42:49,909 --> 00:42:53,869
what happened in Queensland intelligent

1001
00:42:52,250 --> 00:42:55,849
design doesn't seem to be a threat it

1002
00:42:53,869 --> 00:42:57,619
doesn't exist there the big threat the

1003
00:42:55,849 --> 00:42:59,839
massive threat which nearly took over

1004
00:42:57,619 --> 00:43:02,269
Queensland education system was creation

1005
00:42:59,840 --> 00:43:05,480
science and I remember way way back to

1006
00:43:02,269 --> 00:43:08,059
25 years ago now a an enthusiastic

1007
00:43:05,480 --> 00:43:11,059
fundamentalist put into my hand a pile

1008
00:43:08,059 --> 00:43:14,239
of highly coloured creationist magazines

1009
00:43:11,059 --> 00:43:17,360
and he got me to promise that I would

1010
00:43:14,239 --> 00:43:19,159
read them and I read them and they're

1011
00:43:17,360 --> 00:43:21,050
the same kind of ugly you can in fact

1012
00:43:19,159 --> 00:43:23,239

motion would pitch from over again and

1013

00:43:21,050 --> 00:43:25,730

you know I read them and if you just

1014

00:43:23,239 --> 00:43:28,069

read them if you simply look at it it

1015

00:43:25,730 --> 00:43:30,260

creates the impression of a mass of

1016

00:43:28,070 --> 00:43:32,180

genuine scientific evidence because they

1017

00:43:30,260 --> 00:43:33,470

do quote real scientists they quote them

1018

00:43:32,179 --> 00:43:34,759

they cite them very first when they

1019

00:43:33,469 --> 00:43:36,649

summarize them and it gives the

1020

00:43:34,760 --> 00:43:38,060

impression of this Titanic massive

1021

00:43:36,650 --> 00:43:40,670

evidence which is going to sweep aside

1022

00:43:38,059 --> 00:43:42,710

all this evolutionary nonsense and then

1023

00:43:40,670 --> 00:43:46,880

the truth will emerge and we all know

1024

00:43:42,710 --> 00:43:49,190

what that is so it this reflects so

1025

00:43:46,880 --> 00:43:51,108

badly on my own intelligence it took me

1026

00:43:49,190 --> 00:43:54,019

several weeks to figure out what

1027
00:43:51,108 --> 00:43:56,179
next what I did was I took the highly

1028
00:43:54,018 --> 00:43:58,098
colored scientific magazines those

1029
00:43:56,179 --> 00:44:00,409
creationist bank things down to my

1030
00:43:58,099 --> 00:44:04,009
University Library and when they refer

1031
00:44:00,409 --> 00:44:08,389
to a scientist I checked it and what am

1032
00:44:04,009 --> 00:44:11,298
I found was that the quotes were ninety

1033
00:44:08,389 --> 00:44:13,278
percent blatantly false for example Eric

1034
00:44:11,298 --> 00:44:15,409
quota scientist and they would alter the

1035
00:44:13,278 --> 00:44:17,659
words of the scientist had written to

1036
00:44:15,409 --> 00:44:19,518
mean something quite different or they

1037
00:44:17,659 --> 00:44:21,440
would take some data and they would

1038
00:44:19,518 --> 00:44:22,848
misrepresent what it meant and the

1039
00:44:21,440 --> 00:44:25,159
statistics i came up with there were two

1040
00:44:22,849 --> 00:44:27,140
statistics first that ninety percent of

1041
00:44:25,159 --> 00:44:29,598
creationist references to science were

1042
00:44:27,139 --> 00:44:31,338
blatantly false they misrepresented the

1043
00:44:29,599 --> 00:44:33,499
evidence and secondly that on average

1044
00:44:31,338 --> 00:44:35,838
every creation is reference to science

1045
00:44:33,498 --> 00:44:37,518
had two mistakes one was a major one

1046
00:44:35,838 --> 00:44:38,900
which would retain that alleging never

1047
00:44:37,518 --> 00:44:40,729
were the one was a minor one lie getting

1048
00:44:38,900 --> 00:44:43,190
all the wrong or the page wrong or the

1049
00:44:40,730 --> 00:44:45,619
date wrong now those of you who are

1050
00:44:43,190 --> 00:44:47,659
awake will say well if 90 percenter that

1051
00:44:45,619 --> 00:44:50,329
were false what about the ten percent

1052
00:44:47,659 --> 00:44:51,980
that one false well the answer is that

1053
00:44:50,329 --> 00:44:54,950
these ten percent were non-contentious

1054
00:44:51,980 --> 00:44:57,498
one of them for example was on a report

1055

00:44:54,949 --> 00:44:58,969
that an American x-ray satellite had

1056
00:44:57,498 --> 00:45:00,798
taken x-ray pictures of the Sahara

1057
00:44:58,969 --> 00:45:03,288
Desert and had discovered the tea would

1058
00:45:00,798 --> 00:45:04,759
be to be wet at one stage okay well

1059
00:45:03,289 --> 00:45:07,360
that's non-contentious there's nothing

1060
00:45:04,759 --> 00:45:09,010
in the fact

1061
00:45:07,360 --> 00:45:11,920
the distal herb it's also a perfectly

1062
00:45:09,010 --> 00:45:14,560
content content shoot compatible with

1063
00:45:11,920 --> 00:45:16,599
modern geological theory so those ten

1064
00:45:14,559 --> 00:45:18,099
percent were non-contentious wherever

1065
00:45:16,599 --> 00:45:19,569
the evidence was contentious whether

1066
00:45:18,099 --> 00:45:21,279
they claim that the evidence showed the

1067
00:45:19,570 --> 00:45:23,980
creation is right then they

1068
00:45:21,280 --> 00:45:25,900
misrepresented as a result of that I was

1069
00:45:23,980 --> 00:45:28,090

then able to write a couple of dozen

1070

00:45:25,900 --> 00:45:29,950

papers which when two teachers magazine

1071

00:45:28,090 --> 00:45:32,260

school librarians magazines and things

1072

00:45:29,949 --> 00:45:34,989

like that making it an issue of

1073

00:45:32,260 --> 00:45:37,330

integrity not an issue of religion but

1074

00:45:34,989 --> 00:45:40,239

an issue of integrity do we want our

1075

00:45:37,329 --> 00:45:43,480

children to be subjected to this kind of

1076

00:45:40,239 --> 00:45:50,109

blatant misrepresentation and the trench

1077

00:45:43,480 --> 00:45:52,630

is absolutely hated it I want to mention

1078

00:45:50,110 --> 00:45:55,120

one more thing that you know citizens

1079

00:45:52,630 --> 00:46:00,099

and people can do as a way of battling

1080

00:45:55,119 --> 00:46:01,239

the suicides and actually Kylie said

1081

00:46:00,099 --> 00:46:03,219

something a few minutes going to join my

1082

00:46:01,239 --> 00:46:04,299

memory on this um you know if you've

1083

00:46:03,219 --> 00:46:10,359

ever heard of this thing called the

1084
00:46:04,300 --> 00:46:12,550
internet star blog I did I started to

1085
00:46:10,360 --> 00:46:14,230
walk up you know eight nine months ago

1086
00:46:12,550 --> 00:46:18,039
it's called The Skeptical teacher google

1087
00:46:14,230 --> 00:46:21,550
it and hey it's enormously easy to do

1088
00:46:18,039 --> 00:46:24,489
you can actually if you use a few tricks

1089
00:46:21,550 --> 00:46:26,950
to to get traffic to it you can actually

1090
00:46:24,489 --> 00:46:28,539
reach a very wide audience if you're on

1091
00:46:26,949 --> 00:46:33,219
Facebook advertising through Facebook

1092
00:46:28,539 --> 00:46:36,820
and represent the pro science point of

1093
00:46:33,219 --> 00:46:39,489
view among your own circle of friends

1094
00:46:36,820 --> 00:46:41,470
and acquaintances and basically go viral

1095
00:46:39,489 --> 00:46:43,299
with it because i was actually amazed

1096
00:46:41,469 --> 00:46:44,829
wasn't laughing about this stuff all the

1097
00:46:43,300 --> 00:46:46,030
time my wife left me one day and said

1098
00:46:44,829 --> 00:46:47,679
she should we always start a block which

1099
00:46:46,030 --> 00:46:49,740
was code for honey i love you but shut

1100
00:46:47,679 --> 00:46:49,739
up

1101
00:46:50,239 --> 00:46:56,879
and so I did and I could not believe how

1102
00:46:53,570 --> 00:46:58,380
quickly it took off so you know that's

1103
00:46:56,880 --> 00:47:00,000
something else you can do you know check

1104
00:46:58,380 --> 00:47:01,380
your legs together respond to the letter

1105
00:47:00,000 --> 00:47:03,929
to the editor responding to comments

1106
00:47:01,380 --> 00:47:05,369
sections two letters to the editor you

1107
00:47:03,929 --> 00:47:07,679
know you know respond on message boards

1108
00:47:05,369 --> 00:47:10,289
a blog now there's all kinds of things

1109
00:47:07,679 --> 00:47:13,559
that normal everyday people can do to

1110
00:47:10,289 --> 00:47:15,119
counter this stuff one of the interviews

1111
00:47:13,559 --> 00:47:17,549
that we did for the skeptic zone

1112

00:47:15,119 --> 00:47:19,259
intriguingly enough the gentleman in

1113
00:47:17,550 --> 00:47:21,660
question we should be anonymous so we

1114
00:47:19,260 --> 00:47:23,580
had to record our questions send it to

1115
00:47:21,659 --> 00:47:25,079
them they recorded their questions

1116
00:47:23,579 --> 00:47:29,960
center back to us and we put it together

1117
00:47:25,079 --> 00:47:32,819
a pothole or 54 on YouTube who has yeah

1118
00:47:29,960 --> 00:47:35,760
visit us he is Australian or very proud

1119
00:47:32,820 --> 00:47:37,590
to say despite the lovely British accent

1120
00:47:35,760 --> 00:47:41,840
but then you two are Australian to lunch

1121
00:47:37,590 --> 00:47:44,789
Martin sir yes pot all 54 has created

1122
00:47:41,840 --> 00:47:47,190
youtube videos which are available to be

1123
00:47:44,789 --> 00:47:48,840
downloaded and sent out to people and

1124
00:47:47,190 --> 00:47:51,240
that's another way of essentially doing

1125
00:47:48,840 --> 00:47:53,700
a an audio blog and of course there's

1126
00:47:51,239 --> 00:47:55,949

podcast there's Oddcast there are the

1127

00:47:53,699 --> 00:47:58,439

fact that we are seated members freakin

1128

00:47:55,949 --> 00:48:00,869

thinking education very we got together

1129

00:47:58,440 --> 00:48:02,460

via the internet and this is the first

1130

00:48:00,869 --> 00:48:04,319

time that three of the members of the

1131

00:48:02,460 --> 00:48:06,929

group and managed to get together it was

1132

00:48:04,320 --> 00:48:09,390

just purely from their emails for awards

1133

00:48:06,929 --> 00:48:11,460

and appearances at conferences are

1134

00:48:09,389 --> 00:48:12,929

networking that way and we hope to do

1135

00:48:11,460 --> 00:48:14,880

more and touch base with even more

1136

00:48:12,929 --> 00:48:17,029

teachers of share experiences and are

1137

00:48:14,880 --> 00:48:17,030

these

1138

00:48:20,170 --> 00:48:23,750

to learn more about the panelists you

1139

00:48:22,400 --> 00:48:27,858

can check out the National Center for

1140

00:48:23,750 --> 00:48:30,889

Science Education at NCSE webs or see

1141
00:48:27,858 --> 00:48:33,288
Kevin bounce site is at see Kevin baucom

1142
00:48:30,889 --> 00:48:35,659
and the blocks of myself Matt Lowry and

1143
00:48:33,289 --> 00:48:38,720
Barbra Drescher can be found at hot

1144
00:48:35,659 --> 00:48:49,848
black com skeptical teacher da wordpress

1145
00:48:38,719 --> 00:48:52,038
com and I CBS everywhere com hi this is

1146
00:48:49,849 --> 00:48:53,210
travis from Granite State skeptics to

1147
00:48:52,039 --> 00:48:55,250
tell you about our upcoming

1148
00:48:53,210 --> 00:48:57,588
investigation of an allegedly haunted

1149
00:48:55,250 --> 00:48:59,449
location this Halloween here in New

1150
00:48:57,588 --> 00:49:01,130
Hampshire we will be posting our

1151
00:48:59,449 --> 00:49:03,230
findings live on twitter and if

1152
00:49:01,130 --> 00:49:05,750
technology permits we will be streaming

1153
00:49:03,230 --> 00:49:07,548
live video as well following the event

1154
00:49:05,750 --> 00:49:09,798
we will be meeting at the hannah duston

1155
00:49:07,548 --> 00:49:11,500
memorial in boscawen new hampshire to go

1156
00:49:09,798 --> 00:49:14,150
over the findings and take questions

1157
00:49:11,500 --> 00:49:16,068
after that we will be inviting all those

1158
00:49:14,150 --> 00:49:18,889
that attend along on another

1159
00:49:16,068 --> 00:49:21,170
investigation in Manchester it should be

1160
00:49:18,889 --> 00:49:23,509
great fun and we'd love for you to be a

1161
00:49:21,170 --> 00:49:26,269
part of it you can follow along at

1162
00:49:23,510 --> 00:49:28,900
twitter.com / GS skeptics and get more

1163
00:49:26,269 --> 00:49:33,548
details at Granite State skeptics org

1164
00:49:28,900 --> 00:49:33,548
enjoy the rest of the skeptic zone

1165
00:49:36,858 --> 00:49:40,130
the young scientist Awards are awarded

1166
00:49:38,778 --> 00:49:43,309
annually by the Science Teachers

1167
00:49:40,130 --> 00:49:45,230
Association of New South Wales on the 26

1168
00:49:43,309 --> 00:49:47,089
of October attended the young scientist

1169

00:49:45,230 --> 00:49:48,949
award ceremony as a representative of

1170
00:49:47,088 --> 00:49:51,349
Australian skeptics and had the pleasure

1171
00:49:48,949 --> 00:49:53,989
of seeing budding scientists aged 6 to

1172
00:49:51,349 --> 00:49:56,960
18 and I'm not joking being honored for

1173
00:49:53,989 --> 00:49:58,730
outstanding works of science awards were

1174
00:49:56,960 --> 00:50:01,249
given to all finalists which were

1175
00:49:58,730 --> 00:50:04,608
grouped by age kindergarten to year to

1176
00:50:01,248 --> 00:50:07,939
year years three to six is seven to nine

1177
00:50:04,608 --> 00:50:09,679
in years ten to twelve special awards

1178
00:50:07,940 --> 00:50:11,960
were also given for special achievements

1179
00:50:09,679 --> 00:50:14,509
in various fields of science followed by

1180
00:50:11,960 --> 00:50:17,599
the grand awards the award for young

1181
00:50:14,509 --> 00:50:19,068
scientist of the year 2009 went to Ethan

1182
00:50:17,599 --> 00:50:21,829
Batson from the Illawarra Grammar School

1183
00:50:19,068 --> 00:50:23,239

in Wollongong after the ceremony I

1184

00:50:21,829 --> 00:50:27,380
caught up with Ethan for a short

1185

00:50:23,239 --> 00:50:29,480
conversation this is Ron Cey given that

1186

00:50:27,380 --> 00:50:31,849
the young scientist awards presented by

1187

00:50:29,480 --> 00:50:33,259
the Science Teachers Association of New

1188

00:50:31,849 --> 00:50:36,259
South Wales and I'm sitting here with a

1189

00:50:33,259 --> 00:50:40,338
young scientist of the year for 2009

1190

00:50:36,259 --> 00:50:41,960
Ethan button hello Ethan do you want to

1191

00:50:40,338 --> 00:50:44,858
tell me about the project that you did

1192

00:50:41,960 --> 00:50:47,869
that one you this wonderful award

1193

00:50:44,858 --> 00:50:50,630
alright the project that I was doing was

1194

00:50:47,869 --> 00:50:53,480
I was trying to find a new measure or

1195

00:50:50,630 --> 00:50:55,900
something to measure with ultraviolet

1196

00:50:53,480 --> 00:50:58,849
radiation oh I heard about this film

1197

00:50:55,900 --> 00:51:02,269
there was left outside near the window

1198
00:50:58,849 --> 00:51:04,489
sill and it turned a deeper blue color

1199
00:51:02,268 --> 00:51:06,229
than it was actually originally so I

1200
00:51:04,489 --> 00:51:08,509
decided that I wanted to do a few

1201
00:51:06,230 --> 00:51:10,969
experiments with this film to see if it

1202
00:51:08,509 --> 00:51:14,599
actually could measure some type of

1203
00:51:10,969 --> 00:51:16,699
radiation so I did a few tests one I put

1204
00:51:14,599 --> 00:51:18,259
it under incandescent light switch just

1205
00:51:16,699 --> 00:51:23,480
puts out visible and a little bit of

1206
00:51:18,259 --> 00:51:25,880
heat and over eight days no really no

1207
00:51:23,480 --> 00:51:30,199
change occurred ah then I put it in the

1208
00:51:25,880 --> 00:51:32,749
oven for a 50 degrees and for about five

1209
00:51:30,199 --> 00:51:35,239
minutes and no change occurred there so

1210
00:51:32,748 --> 00:51:37,818
since there are three types of

1211
00:51:35,239 --> 00:51:40,249
electromagnetic radiation that are being

1212
00:51:37,818 --> 00:51:42,949
irradiated from the Sun which is

1213
00:51:40,248 --> 00:51:44,659
ultraviolet visible light and infrared

1214
00:51:42,949 --> 00:51:47,509
which is heat

1215
00:51:44,659 --> 00:51:50,358
I had to assume that it actually did it

1216
00:51:47,510 --> 00:51:52,250
was affected by ultraviolet radiation

1217
00:51:50,358 --> 00:51:53,889
and I believe you do you drew a

1218
00:51:52,250 --> 00:51:56,088
calibration chart is that correct

1219
00:51:53,889 --> 00:51:58,818
calibration curve I used the information

1220
00:51:56,088 --> 00:52:00,798
which was I found the net optical

1221
00:51:58,818 --> 00:52:03,650
density and then I verse that version

1222
00:52:00,798 --> 00:52:06,230
this is the exposure and then it can't

1223
00:52:03,650 --> 00:52:08,690
come up with the trend line and then via

1224
00:52:06,230 --> 00:52:13,789
that trend line I found an equation that

1225
00:52:08,690 --> 00:52:16,460
was best for all of the results and that

1226

00:52:13,789 --> 00:52:20,299
pretty much allowed me to extremely

1227
00:52:16,460 --> 00:52:22,849
easily with that equation to find out

1228
00:52:20,298 --> 00:52:25,400
how long and what exposure the

1229
00:52:22,849 --> 00:52:29,048
ultraviolet radiation sensitive film

1230
00:52:25,400 --> 00:52:31,460
every T GAF chromic was exposed to

1231
00:52:29,048 --> 00:52:33,559
there's absolutely fantastic now I want

1232
00:52:31,460 --> 00:52:35,449
to point out that as I mentioned the

1233
00:52:33,559 --> 00:52:37,460
earlier a lot of people in the audience

1234
00:52:35,449 --> 00:52:40,279
kind of an inkling that you could be the

1235
00:52:37,460 --> 00:52:42,230
winner because you were on the stage

1236
00:52:40,280 --> 00:52:46,010
what about four or five times through

1237
00:52:42,230 --> 00:52:47,659
the evening so that was I was not a

1238
00:52:46,010 --> 00:52:49,640
surprise but obviously very very

1239
00:52:47,659 --> 00:52:52,548
pleasing to see on t see you there it's

1240
00:52:49,639 --> 00:52:54,739

a great achievement and now obviously

1241
00:52:52,548 --> 00:52:56,239
this is a recording so people don't see

1242
00:52:54,739 --> 00:52:58,759
you and they also haven't heard what

1243
00:52:56,239 --> 00:52:59,838
happened here during the proceedings so

1244
00:52:58,760 --> 00:53:01,010
they don't know how old you are woody

1245
00:52:59,838 --> 00:53:04,219
tell us how old you are in what year

1246
00:53:01,010 --> 00:53:07,640
you're in I mean you 7 I'm 2014 December

1247
00:53:04,219 --> 00:53:09,528
so obviously that's even that the

1248
00:53:07,639 --> 00:53:12,730
achievement of winning this award is

1249
00:53:09,528 --> 00:53:15,048
even more amazing considering your age

1250
00:53:12,730 --> 00:53:17,289
very well done congratulations he

1251
00:53:15,048 --> 00:53:17,288
thanked

1252
00:53:19,460 --> 00:53:23,818
yo guys i was talking to Richard

1253
00:53:21,809 --> 00:53:25,798
solvency today all right he said if we

1254
00:53:23,818 --> 00:53:27,989
record a trailer for our podcast

1255
00:53:25,798 --> 00:53:30,030
skeptics with a que he'd play it on the

1256
00:53:27,989 --> 00:53:31,288
other Shore nice nice of him that's very

1257
00:53:30,030 --> 00:53:32,760
generous it's pretty good i'm not sure

1258
00:53:31,289 --> 00:53:34,289
what we could do though I mean well

1259
00:53:32,760 --> 00:53:37,079
suppose you tell people the shows about

1260
00:53:34,289 --> 00:53:39,000
but it's basically this yeah but yeah

1261
00:53:37,079 --> 00:53:40,740
but you know we talk about science and

1262
00:53:39,000 --> 00:53:41,730
skepticism and things that's that's true

1263
00:53:40,739 --> 00:53:43,679
I suppose you know you mentioned the

1264
00:53:41,730 --> 00:53:45,780
website address not merseyside skeptics

1265
00:53:43,679 --> 00:53:47,399
todo UK yeah yeah just like searches

1266
00:53:45,780 --> 00:53:49,859
nineteen's oh and then we could end with

1267
00:53:47,400 --> 00:53:53,010
like a big song like the skeptics with

1268
00:53:49,858 --> 00:53:57,239
okay oh no no no no no don't don't do

1269
00:53:53,010 --> 00:53:59,520
that welcome to the token skeptic quick

1270
00:53:57,239 --> 00:54:01,709
roundup of blog sites podcasts and

1271
00:53:59,519 --> 00:54:03,538
conferences coming up the Australian

1272
00:54:01,710 --> 00:54:05,760
skeptics national convention is even

1273
00:54:03,539 --> 00:54:07,710
closer now our very own dr. Rachel

1274
00:54:05,760 --> 00:54:09,720
Dunlop will be presenting in Brisbane at

1275
00:54:07,710 --> 00:54:12,960
the University of Queensland from

1276
00:54:09,719 --> 00:54:14,699
November the 27th to the 29th dr. Martin

1277
00:54:12,960 --> 00:54:16,470
bridge stock who you just heard on the

1278
00:54:14,699 --> 00:54:18,989
panel discussion for this week's episode

1279
00:54:16,469 --> 00:54:21,118
will be doing a book launch for beyond

1280
00:54:18,989 --> 00:54:23,338
belief skepticism science and the

1281
00:54:21,119 --> 00:54:25,500
paranormal this has been published by

1282
00:54:23,338 --> 00:54:27,058
Cambridge University Press and should be

1283

00:54:25,500 --> 00:54:28,650
of interest to all of those keen on

1284
00:54:27,059 --> 00:54:30,900
either learning or teaching about

1285
00:54:28,650 --> 00:54:34,108
skepticism the Australian skeptics

1286
00:54:30,900 --> 00:54:36,809
website at skeptics com au has further

1287
00:54:34,108 --> 00:54:38,519
details monster talk podcast is now

1288
00:54:36,809 --> 00:54:40,950
partnered with skeptic magazine and

1289
00:54:38,519 --> 00:54:43,500
skipped akala T podcast head on over to

1290
00:54:40,949 --> 00:54:45,358
monster talk dot org to listen to the

1291
00:54:43,500 --> 00:54:47,670
podcast team talk about the science

1292
00:54:45,358 --> 00:54:50,068
behind cryptozoological and legendary

1293
00:54:47,670 --> 00:54:52,470
creatures such as Bigfoot the Loch Ness

1294
00:54:50,068 --> 00:54:54,869
monster werewolves and Benjamin Radford

1295
00:54:52,469 --> 00:54:56,939
Tim Minchin is about to start his second

1296
00:54:54,869 --> 00:54:58,740
Australian tour and you might still be

1297
00:54:56,940 --> 00:55:01,289

able to find tickets by checking Tim

1298

00:54:58,739 --> 00:55:03,239

Minchin com the ready for this tour DVD

1299

00:55:01,289 --> 00:55:05,099

has been released in australia for about

1300

00:55:03,239 --> 00:55:06,659

a month now so if you haven't had the

1301

00:55:05,099 --> 00:55:09,289

chance you can still see the show at

1302

00:55:06,659 --> 00:55:11,818

home and download the songs on itunes

1303

00:55:09,289 --> 00:55:13,770

finally the rise of atheism conference

1304

00:55:11,818 --> 00:55:15,838

is not deterred by denial of service

1305

00:55:13,769 --> 00:55:17,730

attacks their website is working fine

1306

00:55:15,838 --> 00:55:22,578

and they're still selling tickets at

1307

00:55:17,730 --> 00:55:22,579

atheist convention or a year

1308

00:55:23,039 --> 00:55:30,759

and now enjoy a few snippets of the

1309

00:55:26,590 --> 00:55:34,300

radio show dr. HC and I did with Glenn

1310

00:55:30,760 --> 00:55:36,670

wheeler on sydney's radio 2 GB ok let's

1311

00:55:34,300 --> 00:55:39,550

let's look at some some alternate

1312
00:55:36,670 --> 00:55:41,440
examples of where you guys like to

1313
00:55:39,550 --> 00:55:43,420
analyze whether it's true or not and I

1314
00:55:41,440 --> 00:55:47,170
mentioned earlier on about the spoon

1315
00:55:43,420 --> 00:55:49,990
bending exits on Yuri Gillen who was you

1316
00:55:47,170 --> 00:55:52,960
know I guess probably more famous what

1317
00:55:49,989 --> 00:55:54,279
in the 1770s drifting into the 80s he

1318
00:55:52,960 --> 00:55:56,170
sort of tried to have a come back in the

1319
00:55:54,280 --> 00:55:58,240
90s I think he's still buzzing around

1320
00:55:56,170 --> 00:55:59,980
business yeah still bending spoons oh

1321
00:55:58,239 --> 00:56:02,679
yeah yeah that sees one of these four

1322
00:55:59,980 --> 00:56:06,000
tricks with one of four tricks he does

1323
00:56:02,679 --> 00:56:08,589
are you such a bitch you are such a bit

1324
00:56:06,000 --> 00:56:11,050
now spoon bending is is a trick you can

1325
00:56:08,590 --> 00:56:12,789
learn from the the books it really does

1326
00:56:11,050 --> 00:56:14,800
it so easily with one finger well I tell

1327
00:56:12,789 --> 00:56:16,210
you what grab that spoon oh yeah i'm

1328
00:56:14,800 --> 00:56:17,230
passing lane a spoon at the moment

1329
00:56:16,210 --> 00:56:19,900
happen to have a stand with i do

1330
00:56:17,230 --> 00:56:21,969
retching you have a spoon too I've got a

1331
00:56:19,900 --> 00:56:23,829
spoon here brother now you're happy or

1332
00:56:21,969 --> 00:56:26,199
that spoon yeah yeah it's a metal spoon

1333
00:56:23,829 --> 00:56:27,969
folks it's a silver metal teaspoon that

1334
00:56:26,199 --> 00:56:30,069
you would have in your country girl give

1335
00:56:27,969 --> 00:56:32,379
it a little flex like that yep just make

1336
00:56:30,070 --> 00:56:33,640
sure it's nice and firm okay you happy

1337
00:56:32,380 --> 00:56:35,320
to that spoon right yep you have the

1338
00:56:33,639 --> 00:56:37,960
it's really no particles pass that one

1339
00:56:35,320 --> 00:56:40,990
back to me for a second yep now you take

1340

00:56:37,960 --> 00:56:42,550
that one right now what I'm going to do

1341
00:56:40,989 --> 00:56:44,829
is it hold up your spoon yeah right yep

1342
00:56:42,550 --> 00:56:46,150
hold it right there yeah start tweedle

1343
00:56:44,829 --> 00:56:48,369
the bottom and you'll see an optical

1344
00:56:46,150 --> 00:56:50,110
illusion taking place now I'm just

1345
00:56:48,369 --> 00:56:53,889
wiggling my spin see how that looks like

1346
00:56:50,110 --> 00:56:55,840
it's going really yeah yeah yeah I can

1347
00:56:53,889 --> 00:56:58,000
serve tonight yeah and the more you do

1348
00:56:55,840 --> 00:57:00,789
it the more it looks like it's getting

1349
00:56:58,000 --> 00:57:02,079
robbery and bending it almost looks like

1350
00:57:00,789 --> 00:57:04,980
it's made of plastic right actually

1351
00:57:02,079 --> 00:57:13,960
yours it you know those yours is bending

1352
00:57:04,980 --> 00:57:16,059
no come on like I said hang on a trick

1353
00:57:13,960 --> 00:57:18,400
you can learn so that Nick out of a book

1354
00:57:16,059 --> 00:57:20,230

Nick sitting outside doing our phones

1355

00:57:18,400 --> 00:57:22,539

tonight now listen that come on now do

1356

00:57:20,230 --> 00:57:24,519

it with it now that we're that's been

1357

00:57:22,539 --> 00:57:26,440

there we go all right what I'll do with

1358

00:57:24,519 --> 00:57:27,789

this too hope you take that one what

1359

00:57:26,440 --> 00:57:29,200

I'll do with this because I get to hang

1360

00:57:27,789 --> 00:57:30,400

out too many screws didn't you been that

1361

00:57:29,199 --> 00:57:32,049

then you've been the hug but I've got

1362

00:57:30,400 --> 00:57:33,490

lots of speech maker hold its been like

1363

00:57:32,050 --> 00:57:35,530

you bend the spoon was this is one you

1364

00:57:33,489 --> 00:57:38,709

no no one its prey you're broken break

1365

00:57:35,530 --> 00:57:40,090

it like I said this is unbelievable will

1366

00:57:38,710 --> 00:57:41,949

you take that one you take that one now

1367

00:57:40,090 --> 00:57:43,720

right just pop it here just rub it like

1368

00:57:41,949 --> 00:57:45,699

that instead of breaking it will try to

1369
00:57:43,719 --> 00:57:51,699
make this end curl up they see see how

1370
00:57:45,699 --> 00:57:54,699
that's curling up like that yeah what

1371
00:57:51,699 --> 00:57:58,449
stop hang on there we generally good

1372
00:57:54,699 --> 00:57:59,710
trick for radio isn't this is oh yeah

1373
00:57:58,449 --> 00:58:01,449
that is bizarre all right I've never

1374
00:57:59,710 --> 00:58:02,800
seen you do that before let me just tell

1375
00:58:01,449 --> 00:58:05,199
the people at home because you're not

1376
00:58:02,800 --> 00:58:06,760
Rachel there's ribs of ocean oh god this

1377
00:58:05,199 --> 00:58:08,889
is radio so people at home going what

1378
00:58:06,760 --> 00:58:10,510
the hell are they you know we're doing

1379
00:58:08,889 --> 00:58:13,000
the uri geller exercise here and I've

1380
00:58:10,510 --> 00:58:14,440
got the Australian skeptics sitting in

1381
00:58:13,000 --> 00:58:15,969
here showing me that you know what uri

1382
00:58:14,440 --> 00:58:17,260
geller used to do all those years ago on

1383
00:58:15,969 --> 00:58:20,079
the don line show and various other

1384
00:58:17,260 --> 00:58:22,240
programs was albeit it but it's a trick

1385
00:58:20,079 --> 00:58:24,730
now the thing about spoon bathing is

1386
00:58:22,239 --> 00:58:26,379
it's a great trick and magicians have

1387
00:58:24,730 --> 00:58:28,420
been doing it for years and entertaining

1388
00:58:26,380 --> 00:58:30,610
people legitimately and making many

1389
00:58:28,420 --> 00:58:32,950
people happy if someone comes along and

1390
00:58:30,610 --> 00:58:34,510
says it's not a trick it's doing it

1391
00:58:32,949 --> 00:58:36,250
through mystical forces and I've got

1392
00:58:34,510 --> 00:58:37,960
special powers it's sort of like that's

1393
00:58:36,250 --> 00:58:39,309
just spoiling it for the magicians and

1394
00:58:37,960 --> 00:58:41,108
spoiling it for the audience who will

1395
00:58:39,309 --> 00:58:43,659
come along to see a good performance and

1396
00:58:41,108 --> 00:58:45,579
as you can see I've just done it right

1397

00:58:43,659 --> 00:58:47,319
here in the studio better than Geller

1398
00:58:45,579 --> 00:58:48,429
I'm still amazed what you just did

1399
00:58:47,320 --> 00:58:50,260
because you didn't just bend the spoon

1400
00:58:48,429 --> 00:58:51,969
you broke this yeah yeah and you did it

1401
00:58:50,260 --> 00:58:53,740
without for that's that that's the

1402
00:58:51,969 --> 00:58:55,089
hallmark of a good trick if it looked

1403
00:58:53,739 --> 00:58:56,319
like a trick would be a terrible trick

1404
00:58:55,090 --> 00:58:58,900
it has to look like you're using

1405
00:58:56,320 --> 00:59:00,369
mystical magical forces Rachel I'm

1406
00:58:58,900 --> 00:59:02,139
personally by the medical aspect of all

1407
00:59:00,369 --> 00:59:05,260
of this because obviously as he said

1408
00:59:02,139 --> 00:59:07,299
before the weak and the vulnerable

1409
00:59:05,260 --> 00:59:10,270
people who are suffering with terminal

1410
00:59:07,300 --> 00:59:12,730
diagnosis I got to look for anything and

1411
00:59:10,269 --> 00:59:14,139

everything to try and cure them or at

1412

00:59:12,730 --> 00:59:17,260

least extend their life or give them

1413

00:59:14,139 --> 00:59:19,059

some quality of life ya know what are

1414

00:59:17,260 --> 00:59:21,190

the sorts of examples of things that you

1415

00:59:19,059 --> 00:59:24,400

know you've looked at that that have

1416

00:59:21,190 --> 00:59:26,710

proven to be absolute rubbish there's so

1417

00:59:24,400 --> 00:59:28,079

many Glen but I'm I suppose one of them

1418

00:59:26,710 --> 00:59:31,630

one of the things that's really

1419

00:59:28,079 --> 00:59:33,730

dangerous and a nasty is when people

1420

00:59:31,630 --> 00:59:36,430

claim that they've got cancer cures and

1421

00:59:33,730 --> 00:59:38,710

there was an incident recently in South

1422

00:59:36,429 --> 00:59:41,230

Australia where a woman was running an

1423

00:59:38,710 --> 00:59:42,849

alternative medicine clinic and she was

1424

00:59:41,230 --> 00:59:46,599

claiming she could cure cancer by

1425

00:59:42,849 --> 00:59:49,538

prescribing KFC to patients

1426
00:59:46,599 --> 00:59:51,400
and people believed it and then these

1427
00:59:49,539 --> 00:59:53,049
people have terminal cancer so as you

1428
00:59:51,400 --> 00:59:54,338
say they're desperate and they're ill

1429
00:59:53,048 --> 00:59:56,978
and they know they're going to die

1430
00:59:54,338 --> 00:59:59,108
that's not even funny I mean no no no

1431
00:59:56,978 --> 01:00:00,338
you can't even laugh at them so yeah I

1432
00:59:59,108 --> 01:00:02,440
mean a lot of the things we deal with a

1433
01:00:00,338 --> 01:00:04,420
great fun those really are we have an

1434
01:00:02,440 --> 01:00:06,608
enormous amount of fun but some of the

1435
01:00:04,420 --> 01:00:08,259
things had terribly serious yeah and of

1436
01:00:06,608 --> 01:00:11,048
course you probably also remember

1437
01:00:08,259 --> 01:00:13,690
recently the case of the young girl who

1438
01:00:11,048 --> 01:00:16,358
died as a result of contracting or

1439
01:00:13,690 --> 01:00:19,479
having a bad case of eczema and her

1440
01:00:16,358 --> 01:00:21,639
parents were recently committed and

1441
01:00:19,478 --> 01:00:22,989
charged with manslaughter because they

1442
01:00:21,639 --> 01:00:25,058
didn't get her eczema treated and they

1443
01:00:22,989 --> 01:00:27,400
were using homeopathy and homeopathy

1444
01:00:25,059 --> 01:00:29,229
there's really no evidence that it does

1445
01:00:27,400 --> 01:00:31,088
anything either in fact some that's

1446
01:00:29,228 --> 01:00:33,489
another story we could talk about that

1447
01:00:31,088 --> 01:00:35,828
sometime if you're interested but when

1448
01:00:33,489 --> 01:00:37,539
people are suffering because of the

1449
01:00:35,829 --> 01:00:40,900
claims made by what we call quacks

1450
01:00:37,539 --> 01:00:43,630
that's when it does really really a lot

1451
01:00:40,900 --> 01:00:45,579
of harm it's fallen is tonight we've

1452
01:00:43,630 --> 01:00:46,599
we've just about run out of time with it

1453
01:00:45,579 --> 01:00:47,829
we've got more calls when we could

1454

01:00:46,599 --> 01:00:49,479
probably do this for an hour you know

1455
01:00:47,829 --> 01:00:51,309
because people are talking about ghosts

1456
01:00:49,478 --> 01:00:52,868
and career and all sorts of things like

1457
01:00:51,309 --> 01:00:55,869
this and you know sharing an experience

1458
01:00:52,869 --> 01:00:57,548
so we might we might reconvene with its

1459
01:00:55,869 --> 01:00:59,619
down the track in in a few weeks time

1460
01:00:57,548 --> 01:01:00,969
seems like good for it's quite a good

1461
01:00:59,619 --> 01:01:02,890
public in like a bit of a regular

1462
01:01:00,969 --> 01:01:04,298
segment of this and let people share

1463
01:01:02,889 --> 01:01:05,828
their stories and their experiences and

1464
01:01:04,298 --> 01:01:07,659
who knows we might be able to find

1465
01:01:05,829 --> 01:01:09,160
somebody out there that's that's going

1466
01:01:07,659 --> 01:01:11,379
to take you on to 100,000 bucks I'd like

1467
01:01:09,159 --> 01:01:13,868
to see that we'd like to see it too it's

1468
01:01:11,380 --> 01:01:16,749

been going for almost all over 28 well

1469

01:01:13,869 --> 01:01:19,298

30 years almost and in fact we may even

1470

01:01:16,748 --> 01:01:20,949

one that we might invite somebody into

1471

01:01:19,298 --> 01:01:22,568

the studio due to learn how to bend

1472

01:01:20,949 --> 01:01:24,728

spoons as well because know are you fun

1473

01:01:22,568 --> 01:01:26,108

I have seen that Lucas seen that nicca

1474

01:01:24,728 --> 01:01:30,129

Cena tonight I'll tell you what it was

1475

01:01:26,108 --> 01:01:31,538

it was amazing Rachel and Richard thank

1476

01:01:30,130 --> 01:01:33,489

you very much for coming to the studio

1477

01:01:31,539 --> 01:01:34,599

to join us a lot not a problem thanks

1478

01:01:33,489 --> 01:01:35,978

very much quickly mentioned in the

1479

01:01:34,599 --> 01:01:41,349

meantime if people want to find out more

1480

01:01:35,978 --> 01:01:45,308

they can go to [www skeptic zoom TV](http://www.skepticzoom.com) or [ww](http://www.wwe.com)

1481

01:01:41,349 --> 01:01:47,588

skeptics calm you wonderful thanks for

1482

01:01:45,309 --> 01:01:51,180

that it's 30 minutes and I another very

1483
01:01:47,588 --> 01:01:51,179
special guest coming up after this

1484
01:02:02,298 --> 01:02:07,400
thank you for listening to this week's

1485
01:02:04,429 --> 01:02:09,108
episode of the skeptic zone and thank

1486
01:02:07,400 --> 01:02:12,858
you to those people who actually now

1487
01:02:09,108 --> 01:02:14,568
subscribing at 99 cents in episode 2 the

1488
01:02:12,858 --> 01:02:17,150
skeptic zone to help us keep the show

1489
01:02:14,568 --> 01:02:21,139
going you can do that via the paypal

1490
01:02:17,150 --> 01:02:24,259
links at ww skeptics on TV of course

1491
01:02:21,139 --> 01:02:26,028
this is purely voluntary if you want to

1492
01:02:24,259 --> 01:02:28,958
subscribe and helped us enormously if

1493
01:02:26,028 --> 01:02:31,608
not that's fine keep enjoying the show

1494
01:02:28,958 --> 01:02:37,669
until next week this is Richard Saunders

1495
01:02:31,608 --> 01:02:40,068
signing off from Sydney Australia you've

1496
01:02:37,670 --> 01:02:44,688
been listening to the skeptic zone visit

1497
01:02:40,068 --> 01:02:49,279
our website at WWF digs on TV the

1498
01:02:44,688 --> 01:02:52,639
comments contacts an extra video reports

1499
01:02:49,280 --> 01:02:55,240
I skin

1500
01:02:52,639 --> 01:02:55,239
me

1501
01:03:01,579 --> 01:03:03,579
Oh

1502
01:03:08,210 --> 01:03:10,269
you