

Episode **594**

THE  
**SKEPTIC  
ZONE**  
PODCAST

1 March 2020

Live from  
Surf Coast Summer  
Skepticamp VIII

Trish & Chips - Face Masks

Logical Fallacies  
with Michelle Bijkersma  
"Appeal to Antiquity"

Australian Skeptics Newsletter

Maynard at Skepticon 2019  
with  
Cara Santa Maria  
Jennifer Bernstein

[www.skepticzone.tv](http://www.skepticzone.tv)



1  
00:00:11,910 --> 00:00:09,110  
welcome to the skeptic zone the podcast

2  
00:00:13,920 --> 00:00:11,920  
from Australia for science and reason

3  
00:00:23,980 --> 00:00:13,930  
[Music]

4  
00:00:29,990 --> 00:00:26,630  
hello and welcome to the skeptic zone

5  
00:00:32,780 --> 00:00:30,000  
podcast episode number 594 for the first

6  
00:00:35,270 --> 00:00:32,790  
of March 2020 this week coming to you

7  
00:00:42,979 --> 00:00:35,280  
live from south coast summer skeptic

8  
00:00:45,290 --> 00:00:42,989  
camp 8 oh you do that so well what a

9  
00:00:46,729 --> 00:00:45,300  
pleasure it is to come down to victoria

10  
00:00:49,100 --> 00:00:46,739  
i haven't been to this part of victoria

11  
00:00:51,020 --> 00:00:49,110  
before and it's just wonderful to take

12  
00:00:51,770 --> 00:00:51,030  
part in skeptic camp coming up on this

13  
00:00:54,710 --> 00:00:51,780

week's show

14

00:00:57,710 --> 00:00:54,720

trish hand looks at what use our face

15

00:00:59,450 --> 00:00:57,720

masks with the current virus worries we

16

00:01:01,910 --> 00:00:59,460

have Michelle because Mar she's going to

17

00:01:04,999 --> 00:01:01,920

be talking about this week a logical

18

00:01:06,859 --> 00:01:05,009

fallacy appeal to antiquity we have

19

00:01:08,749 --> 00:01:06,869

information from the Australian skeptics

20

00:01:13,550 --> 00:01:08,759

newsletter what's coming up and also

21

00:01:15,770 --> 00:01:13,560

Maynard at skeptic on 2019 interviews

22

00:01:17,990 --> 00:01:15,780

Cara Santa Maria from the skeptics guide

23

00:01:19,460 --> 00:01:18,000

to the universe and Jennifer Bernstein

24

00:01:21,410 --> 00:01:19,470

all that coming up on this week's show

25

00:01:28,290 --> 00:01:21,420

but now it's time for me to put down

26

00:01:43,010 --> 00:01:33,670

[Music]

27

00:01:59,070 --> 00:01:52,440

hmm let's have some Trish and chips is

28

00:02:00,900 --> 00:01:59,080

Trish Han here in Australia as the

29

00:02:03,270 --> 00:02:00,910

temperature rises and summer gets going

30

00:02:06,450 --> 00:02:03,280

some items become incredibly popular in

31

00:02:08,010 --> 00:02:06,460

the shops fans ice cream SuperDuper

32

00:02:10,859 --> 00:02:08,020

swimwear you get the idea

33

00:02:12,449 --> 00:02:10,869

well this summer one of the most popular

34

00:02:14,940 --> 00:02:12,459

purchases across the eastern states at

35

00:02:16,490 --> 00:02:14,950

least has been the humble p2 mask a

36

00:02:18,449 --> 00:02:16,500

friend to medical professionals

37

00:02:21,210 --> 00:02:18,459

firefighters builders and graffiti

38

00:02:22,710 --> 00:02:21,220

artists everywhere this is an item most

39

00:02:31,260 --> 00:02:22,720

people haven't paid any attention to

40

00:02:33,270 --> 00:02:31,270

until recently as I'm sure most of you

41

00:02:35,220 --> 00:02:33,280

know Australia recently had the most

42

00:02:38,070 --> 00:02:35,230

extreme bush fire season ever

43

00:02:41,460 --> 00:02:38,080

and the loss of life nature and property

44

00:02:43,500 --> 00:02:41,470

has been devastating the sheer amount of

45

00:02:45,420 --> 00:02:43,510

fire front has meant that even city folk

46

00:02:48,030 --> 00:02:45,430

like me who experienced some of the

47

00:02:49,890 --> 00:02:48,040

effects of the burning four weeks of

48

00:02:52,170 --> 00:02:49,900

permanent smoky haze filled the skies

49

00:02:54,810 --> 00:02:52,180

and even indoors the smell of smoke

50

00:02:56,220 --> 00:02:54,820

penetrated everything I live nearly a

51  
00:02:58,320 --> 00:02:56,230  
hundred kilometers from the nearest

52  
00:03:00,180 --> 00:02:58,330  
large bushfire and I was finding burnt

53  
00:03:01,320 --> 00:03:00,190  
leaves on my balcony and a thin layer of

54  
00:03:05,100 --> 00:03:01,330  
ash on my furniture

55  
00:03:06,870 --> 00:03:05,110  
it was inescapable obviously this

56  
00:03:08,580 --> 00:03:06,880  
constant exposure to smoke is a health

57  
00:03:10,740 --> 00:03:08,590  
hazard even for those of us with no

58  
00:03:13,350 --> 00:03:10,750  
medical conditions and while the advice

59  
00:03:14,880 --> 00:03:13,360  
has been to stay indoors at work last

60  
00:03:16,800 --> 00:03:14,890  
month we could smell the bushfire smoke

61  
00:03:21,690 --> 00:03:16,810  
in the emergency department it was

62  
00:03:23,490 --> 00:03:21,700  
everywhere then the rain came and did

63  
00:03:24,900 --> 00:03:23,500

the job that even a properly funded fire

64

00:03:28,830 --> 00:03:24,910

service would have struggled with and

65

00:03:31,710 --> 00:03:28,840

the fires were extinguished but as one

66

00:03:34,080 --> 00:03:31,720

crisis dampened another emerged and the

67

00:03:35,370 --> 00:03:34,090

outbreak of CO vid 19 with infections in

68

00:03:37,560 --> 00:03:35,380

Australia well into the double digits

69

00:03:40,800 --> 00:03:37,570

has got people reaching for their masks

70

00:03:42,300 --> 00:03:40,810

again but the effectiveness of masks in

71

00:03:44,190 --> 00:03:42,310

relation to both of these threats is

72

00:03:45,000 --> 00:03:44,200

hugely dependent on the skill of the

73

00:03:48,509 --> 00:03:45,010

wearer and the

74

00:03:50,520 --> 00:03:48,519

type of mask they use there are two main

75

00:03:52,199 --> 00:03:50,530

types that I'll be talking about the

76

00:03:54,899 --> 00:03:52,209

surgical type which protects against

77

00:03:56,490 --> 00:03:54,909

direct splashes and the disposable p2

78

00:03:59,220 --> 00:03:56,500

type which also protects against

79

00:04:01,500 --> 00:03:59,230

airborne threats the difference between

80

00:04:03,720 --> 00:04:01,510

them is that the p2 masks when worn

81

00:04:06,020 --> 00:04:03,730

correctly create a seal around the face

82

00:04:10,170 --> 00:04:06,030

preventing air from bypassing the mask

83

00:04:11,940 --> 00:04:10,180

surgical masks do not in fact surgical

84

00:04:14,369 --> 00:04:11,950

masks are often worn for long periods of

85

00:04:16,110 --> 00:04:14,379

time and by design have gaps at the side

86

00:04:18,300 --> 00:04:16,120

to allow air to flow across the face

87

00:04:21,840 --> 00:04:18,310

this inherently reduces their

88

00:04:23,850 --> 00:04:21,850

effectiveness as an aside for decades

89  
00:04:26,040 --> 00:04:23,860  
the accepted wisdom among surgeons was

90  
00:04:28,350 --> 00:04:26,050  
to sneeze directly at the patient while

91  
00:04:30,420 --> 00:04:28,360  
operating as there was some thought that

92  
00:04:32,010 --> 00:04:30,430  
droplets would be ejected sideways and

93  
00:04:33,750 --> 00:04:32,020  
if you turned your head away you were

94  
00:04:36,120 --> 00:04:33,760  
shooting phlegm into the patient's open

95  
00:04:38,159 --> 00:04:36,130  
wound this has since been tested using

96  
00:04:40,379 --> 00:04:38,169  
pepper and slow-motion filming and has

97  
00:04:41,760 --> 00:04:40,389  
been debunked the advice now is if

98  
00:04:45,719 --> 00:04:41,770  
you're going to sneeze follow your

99  
00:04:48,210 --> 00:04:45,729  
instincts so a p2 mask will help filter

100  
00:04:49,890 --> 00:04:48,220  
out smoke and pathogens while a surgical

101  
00:04:51,810 --> 00:04:49,900  
mask will help stop sneezes getting in

102  
00:04:54,870 --> 00:04:51,820  
and out but will allow other airborne

103  
00:04:56,969 --> 00:04:54,880  
nasties to sneak in the side surely then

104  
00:04:59,520 --> 00:04:56,979  
everyone should be wearing p2 masks over

105  
00:05:01,560 --> 00:04:59,530  
time when out and about right well as

106  
00:05:03,450 --> 00:05:01,570  
someone required to wear one for long

107  
00:05:05,400 --> 00:05:03,460  
periods at work I can tell you you

108  
00:05:05,730 --> 00:05:05,410  
really don't want to if you don't have

109  
00:05:10,200 --> 00:05:05,740  
to

110  
00:05:13,170 --> 00:05:10,210  
impractical in scenarios where you have

111  
00:05:14,879 --> 00:05:13,180  
to move faster than a snail's pace they

112  
00:05:16,770 --> 00:05:14,889  
are also very difficult to actually wear

113  
00:05:19,439 --> 00:05:16,780

correctly and I don't just mean it's a

114

00:05:21,120 --> 00:05:19,449

pain to put on the inside of the masks

115

00:05:23,250 --> 00:05:21,130

quickly gather condensation from your

116

00:05:25,589 --> 00:05:23,260

breath and as you breathe in and out

117

00:05:29,550 --> 00:05:25,599

they inflate and deflate touching your

118

00:05:30,960 --> 00:05:29,560

mouth gross instinctively you pinch and

119

00:05:33,779 --> 00:05:30,970

pull the mask off of your mouth

120

00:05:35,760 --> 00:05:33,789

hello contamination then the elastic

121

00:05:37,439 --> 00:05:35,770

starts to roll up or down the back of

122

00:05:40,409 --> 00:05:37,449

your head and now the mask is touching

123

00:05:42,180 --> 00:05:40,419

your eyelashes great now it's slipped

124

00:05:43,740 --> 00:05:42,190

down there's a gap next to your nose do

125

00:05:46,469 --> 00:05:43,750

you wear glasses because now you can't

126

00:05:49,680 --> 00:05:46,479

see as they fogged up fantastic got a

127

00:05:51,210 --> 00:05:49,690

beard that's a shame honestly they're a

128

00:05:53,040 --> 00:05:51,220

nightmare but when I'm faced with a

129

00:05:55,950 --> 00:05:53,050

measles patient I will tolerate the mask

130

00:05:57,600 --> 00:05:55,960

in fact generally in medical settings we

131

00:05:58,029 --> 00:05:57,610

primarily ask the patients to wear the

132

00:05:59,529 --> 00:05:58,039

mask

133

00:06:01,179 --> 00:05:59,539

as it stops them from coughing and

134

00:06:03,640 --> 00:06:01,189

sneezing on furniture equipment and

135

00:06:05,619 --> 00:06:03,650

other patients even with the best cough

136

00:06:07,749 --> 00:06:05,629

etiquette which not a lot of people have

137

00:06:11,170 --> 00:06:07,759

it's impossible to completely contain a

138

00:06:13,809 --> 00:06:11,180

splutter so should we all be wearing

139

00:06:15,399 --> 00:06:13,819

masks to protect ourselves well unless

140

00:06:16,809 --> 00:06:15,409

you're in a high-risk environment like

141

00:06:18,969 --> 00:06:16,819

working in a clinic or an emergency

142

00:06:22,589 --> 00:06:18,979

department or traveling in an area with

143

00:06:24,429 --> 00:06:22,599

many confirmed cases realistically no

144

00:06:25,839 --> 00:06:24,439

especially not if you haven't been

145

00:06:28,540 --> 00:06:25,849

trained in how to use personal

146

00:06:30,399 --> 00:06:28,550

protective equipment in fact one of the

147

00:06:32,439 --> 00:06:30,409

best ways to ensure a contagion is

148

00:06:34,450 --> 00:06:32,449

spread quickly is to give personal

149

00:06:37,029 --> 00:06:34,460

protective equipment to everyone without

150

00:06:38,589 --> 00:06:37,039

training them in how to use it that

151

00:06:40,389 --> 00:06:38,599

thing you're using to protect yourself

152

00:06:42,269 --> 00:06:40,399

will just as easily be a vector for

153

00:06:44,889 --> 00:06:42,279

contamination if it's not used properly

154

00:06:47,100 --> 00:06:44,899

one thing I see a lot of I went out and

155

00:06:49,540 --> 00:06:47,110

about is people wearing masks badly

156

00:06:50,949 --> 00:06:49,550

there are a few cultural issues to

157

00:06:53,290 --> 00:06:50,959

consider when you see people wearing

158

00:06:55,149 --> 00:06:53,300

masks around the place if they are from

159

00:06:56,859 --> 00:06:55,159

East Asian countries there is a history

160

00:07:00,279 --> 00:06:56,869

there which luckily passed Australia by

161

00:07:02,559 --> 00:07:00,289

almost entirely 17 years ago when SARS

162

00:07:04,959 --> 00:07:02,569

struck hundreds of people in East Asia

163

00:07:07,929 --> 00:07:04,969

died and mask-wearing became compulsory

164

00:07:10,119 --> 00:07:07,939

in many cities what that unfortunately

165

00:07:11,769 --> 00:07:10,129

led to was also poor masks use and bad

166

00:07:13,239 --> 00:07:11,779

habits which is why you see many people

167

00:07:16,899 --> 00:07:13,249

wearing them around their chin or

168

00:07:18,639 --> 00:07:16,909

hanging off of one ear another problem

169

00:07:21,129 --> 00:07:18,649

with thousands of people wearing masks

170

00:07:22,839 --> 00:07:21,139

badly and unnecessarily is that there is

171

00:07:24,670 --> 00:07:22,849

only a finite amount of them and

172

00:07:26,489 --> 00:07:24,680

suppliers are starting to take advantage

173

00:07:28,570 --> 00:07:26,499

and price gouging is already happening

174

00:07:30,549 --> 00:07:28,580

there are signs up in the operating

175

00:07:32,529 --> 00:07:30,559

theaters where I work reminding us not

176  
00:07:34,089 --> 00:07:32,539  
to waste them because the stock is now

177  
00:07:36,699 --> 00:07:34,099  
being kept under lock and key due to

178  
00:07:38,439 --> 00:07:36,709  
short supply yep that's correct we are

179  
00:07:41,499 --> 00:07:38,449  
running out of surgical masks in the

180  
00:07:43,179 --> 00:07:41,509  
operating theaters patients and visitors

181  
00:07:44,199 --> 00:07:43,189  
have been caught stuffing their pockets

182  
00:07:46,449 --> 00:07:44,209  
with them when they think no one's

183  
00:07:50,110 --> 00:07:46,459  
looking panic has well and truly taken

184  
00:07:51,610 --> 00:07:50,120  
hold so other than the supply issues

185  
00:07:54,489 --> 00:07:51,620  
what are the risks cause of widespread

186  
00:07:56,379 --> 00:07:54,499  
masks use well during the bush fires a

187  
00:07:58,689 --> 00:07:56,389  
very real danger was a false sense of

188  
00:08:00,399 --> 00:07:58,699

safety that masks were giving people the

189

00:08:02,259 --> 00:08:00,409

general health advice was to stay out of

190

00:08:04,929 --> 00:08:02,269

the smoke and only go outside when

191

00:08:06,759 --> 00:08:04,939

absolutely necessary but I saw people

192

00:08:08,439 --> 00:08:06,769

sitting in the park wearing masks when

193

00:08:10,600 --> 00:08:08,449

there was literally ash falling from the

194

00:08:11,830 --> 00:08:10,610

sky they must have assumed they were

195

00:08:15,909 --> 00:08:11,840

safe because of the masks

196

00:08:17,800 --> 00:08:15,919

absolutely not true the other problem

197

00:08:19,330 --> 00:08:17,810

associated with poor technique is that

198

00:08:19,990 --> 00:08:19,340

instead of protecting yourself by

199

00:08:22,830 --> 00:08:20,000

wearing one

200

00:08:25,300 --> 00:08:22,840

you could easily infect yourself instead

201  
00:08:27,340 --> 00:08:25,310  
every time you touch the mask you should

202  
00:08:28,930 --> 00:08:27,350  
wash your hands every time you take the

203  
00:08:31,750 --> 00:08:28,940  
mask off your face it should be thrown

204  
00:08:33,279 --> 00:08:31,760  
away and replaced think about it if

205  
00:08:35,230 --> 00:08:33,289  
you're wearing a mask and talking with

206  
00:08:37,440 --> 00:08:35,240  
Sam who has a respiratory infection but

207  
00:08:40,230 --> 00:08:37,450  
doesn't know it yet every time they talk

208  
00:08:42,700 --> 00:08:40,240  
tiny droplets are hitting your mask

209  
00:08:44,530 --> 00:08:42,710  
later on you go and talk with Jo and

210  
00:08:46,120 --> 00:08:44,540  
while you're talking your mask is

211  
00:08:47,980 --> 00:08:46,130  
cutting into your nose so you pull it

212  
00:08:50,290 --> 00:08:47,990  
away from your face carry on talking and

213  
00:08:51,880 --> 00:08:50,300

touch something maybe your phone then

214

00:08:54,400 --> 00:08:51,890

perhaps you hand your phone to Jo to

215

00:08:58,630 --> 00:08:54,410

recommend a podcast Jo touches their

216

00:09:00,610 --> 00:08:58,640

mouth later you rub your eye yup so

217

00:09:03,670 --> 00:09:00,620

ultimately what can we do to protect

218

00:09:05,740 --> 00:09:03,680

ourselves well if it's smoke or

219

00:09:07,720 --> 00:09:05,750

pollution download an app that shows the

220

00:09:09,880 --> 00:09:07,730

local air quality and stay indoors when

221

00:09:11,650 --> 00:09:09,890

it's bad and lobby your local

222

00:09:14,710 --> 00:09:11,660

politicians to act on climate change and

223

00:09:16,480 --> 00:09:14,720

pollutants and if it's pathogens you're

224

00:09:18,520 --> 00:09:16,490

concerned about well first off make sure

225

00:09:20,950 --> 00:09:18,530

you're fully vaccinated and get your flu

226

00:09:23,350 --> 00:09:20,960

vaccine it's available practice

227

00:09:25,240 --> 00:09:23,360

excellent hand hygiene and test your

228

00:09:27,340 --> 00:09:25,250

skills put some moisturizer on your

229

00:09:29,320 --> 00:09:27,350

hands close your eyes and pretend you're

230

00:09:30,790 --> 00:09:29,330

washing your hands then open your eyes

231

00:09:34,480 --> 00:09:30,800

and see the spots that you're routinely

232

00:09:38,470 --> 00:09:34,490

missing stop touching your face stop

233

00:09:42,790 --> 00:09:38,480

touching your face stop touching your

234

00:09:44,950 --> 00:09:42,800

face please clean your phone

235

00:09:46,690 --> 00:09:44,960

occasionally clean things like doorknobs

236

00:09:48,070 --> 00:09:46,700

and taps in your home we don't know how

237

00:09:51,550 --> 00:09:48,080

long some pathogens can survive on

238

00:09:54,130 --> 00:09:51,560

surfaces practice excellent respiratory

239

00:09:56,710 --> 00:09:54,140

etiquette don't cough or sneeze without

240

00:09:59,230 --> 00:09:56,720

covering your mouth ideally use a tissue

241

00:10:00,970 --> 00:09:59,240

or the crook of your elbow they call

242

00:10:03,730 --> 00:10:00,980

this the vampire cough it's brilliant if

243

00:10:05,829 --> 00:10:03,740

you mask off into your hand use the back

244

00:10:08,500 --> 00:10:05,839

of your hand and immediately wash or use

245

00:10:10,420 --> 00:10:08,510

alcohol hand rub support the work of

246

00:10:12,040 --> 00:10:10,430

unions to protect paid sick leave so the

247

00:10:13,900 --> 00:10:12,050

people making your food and driving you

248

00:10:16,990 --> 00:10:13,910

places can afford to take time off when

249

00:10:18,820 --> 00:10:17,000

they're unwell these are all things you

250

00:10:20,380 --> 00:10:18,830

should be doing anyway but these are

251  
00:10:23,500 --> 00:10:20,390  
definitely things you have perfected

252  
00:10:25,630 --> 00:10:23,510  
before you reach for a mask but

253  
00:10:27,610 --> 00:10:25,640  
sometimes a mask is a valid and necess

254  
00:10:29,019 --> 00:10:27,620  
accessory if you're going to be out and

255  
00:10:30,610 --> 00:10:29,029  
about in an area with the number of

256  
00:10:33,220 --> 00:10:30,620  
confirmed cases of viral respiratory

257  
00:10:34,960 --> 00:10:33,230  
infection for example if you've got a

258  
00:10:37,389 --> 00:10:34,970  
cough or a cold and you're wanting to

259  
00:10:38,980 --> 00:10:37,399  
limit your infectious spread ideally

260  
00:10:42,130 --> 00:10:38,990  
isolation would be the first line of

261  
00:10:44,050 --> 00:10:42,140  
defense but it's not always practical so

262  
00:10:46,690 --> 00:10:44,060  
what is the right way to wear a mask

263  
00:10:48,579 --> 00:10:46,700

well to start with make sure the mask is

264

00:10:51,190 --> 00:10:48,589

the correct size and type for you in the

265

00:10:52,930 --> 00:10:51,200

situation wash your hands I'll use

266

00:10:55,840 --> 00:10:52,940

alcohol hand rub before touching the

267

00:10:57,670 --> 00:10:55,850

mask or your face make sure the top of

268

00:11:00,819 --> 00:10:57,680

the mask fully covers your nostrils and

269

00:11:02,650 --> 00:11:00,829

the lower part is under your chin pinch

270

00:11:04,389 --> 00:11:02,660

the nose wire so it molds to the shape

271

00:11:07,630 --> 00:11:04,399

of your nose creating a closed seal

272

00:11:10,720 --> 00:11:07,640

along the top anytime you touch the mask

273

00:11:12,370 --> 00:11:10,730

wash your hands and replace the mask

274

00:11:15,250 --> 00:11:12,380

when it becomes contaminated or if you

275

00:11:17,319 --> 00:11:15,260

have to remove it if you're wearing a p2

276

00:11:20,949 --> 00:11:17,329

mask and you're able to breathe freely

277

00:11:22,750 --> 00:11:20,959

you're wearing it wrong sorry if you're

278

00:11:24,340 --> 00:11:22,760

wearing either type of mask and it

279

00:11:26,110 --> 00:11:24,350

doesn't leave a mark across your face

280

00:11:29,170 --> 00:11:26,120

when you take it off it's too loose to

281

00:11:31,750 --> 00:11:29,180

be effective if it's comfortable it's

282

00:11:34,300 --> 00:11:31,760

not on correctly sorry if you have a

283

00:11:36,790 --> 00:11:34,310

beard shave it into a tiny goatee or

284

00:11:39,579 --> 00:11:36,800

decorative mustache do you see how

285

00:11:40,990 --> 00:11:39,589

impractical all of this is now stop

286

00:11:41,400 --> 00:11:41,000

touching your face and go wash your

287

00:11:51,580 --> 00:11:41,410

hands

288

00:11:51,590 --> 00:11:58,330

[Music]

289

00:12:03,070 --> 00:12:00,820

the reason was the interview show from

290

00:12:04,330 --> 00:12:03,080

the Merseyside skeptic society where

291

00:12:06,550 --> 00:12:04,340

each month I speak to someone about

292

00:12:08,950 --> 00:12:06,560

their fringe beliefs over the earth I've

293

00:12:10,960 --> 00:12:08,960

spoken to psychics UFO believers moon

294

00:12:12,820 --> 00:12:10,970

landing and ayahs flat earthers Hollow

295

00:12:14,680 --> 00:12:12,830

Earth as an all manner of unusual

296

00:12:16,450 --> 00:12:14,690

conspiracy theorists but I've also

297

00:12:18,519 --> 00:12:16,460

talked to a denialists white

298

00:12:20,350 --> 00:12:18,529

supremacists gay conversion therapy

299

00:12:22,240 --> 00:12:20,360

I even interviewed Jim Humble the

300

00:12:23,829 --> 00:12:22,250

inventor of miracle mineral supplement a

301

00:12:25,510 --> 00:12:23,839

form of industrial police that he and

302

00:12:28,300 --> 00:12:25,520

his followers used to treat cancer and

303

00:12:30,430 --> 00:12:28,310

HIV this isn't a debate show my aim

304

00:12:32,740 --> 00:12:30,440

isn't to win an argument but when we

305

00:12:34,870 --> 00:12:32,750

listen to how people promote and justify

306

00:12:36,910 --> 00:12:34,880

the ideas that we disagree with even the

307

00:12:38,650 --> 00:12:36,920

dangerous ones I think you become much

308

00:12:40,420 --> 00:12:38,660

more effective at countering those ideas

309

00:12:42,519 --> 00:12:40,430

if that sounds like something you be

310

00:12:44,470 --> 00:12:42,529

interested in look for be reasonable on

311

00:12:45,370 --> 00:12:44,480

Apple podcasts and everywhere else the

312

00:13:10,030 --> 00:12:45,380

podcast

313

00:13:11,970 --> 00:13:10,040

[Music]

314

00:13:14,730 --> 00:13:11,980

logical fallacies

315

00:13:18,249 --> 00:13:14,740

[Music]

316

00:13:20,170 --> 00:13:18,259

what are logical fallacies and why is it

317

00:13:24,280 --> 00:13:20,180

important that critical thinkers should

318

00:13:27,129 --> 00:13:24,290

know about them a logical fallacy is an

319

00:13:29,139 --> 00:13:27,139

error we can make in reasoning but it

320

00:13:33,819 --> 00:13:29,149

usually crops up when we are discussing

321

00:13:36,220 --> 00:13:33,829

or arguing our point of view some people

322

00:13:38,110 --> 00:13:36,230

might even knowingly use them to try and

323

00:13:42,069 --> 00:13:38,120

score cheap points in an argument

324

00:13:44,619 --> 00:13:42,079

due to intellectual laziness they are

325

00:13:46,900 --> 00:13:44,629

traps we can fall into but if we know

326

00:13:49,150 --> 00:13:46,910

what to look out for we can spot them

327

00:13:55,840 --> 00:13:49,160

when they occur and stop ourselves from

328

00:14:00,460 --> 00:13:55,850

using them this week we'll look at the

329

00:14:03,129 --> 00:14:00,470

appeal to antiquity also known as the

330

00:14:05,860 --> 00:14:03,139

appeal to tradition this is when you

331

00:14:09,009 --> 00:14:05,870

argue an idea or practice is valid

332

00:14:11,379 --> 00:14:09,019

because it has been in use or even

333

00:14:15,220 --> 00:14:11,389

thought to have been in use for tens

334

00:14:17,650 --> 00:14:15,230

hundreds or thousands of years many

335

00:14:21,129 --> 00:14:17,660

ideas have withstood the test of time

336

00:14:23,019 --> 00:14:21,139

our ancient ancestors discovered amazing

337

00:14:26,290 --> 00:14:23,029

things that still hold true today

338

00:14:29,259 --> 00:14:26,300

if you eat certain plants they will make

339

00:14:31,869 --> 00:14:29,269

you sick whereas if you eat other plants

340

00:14:36,129 --> 00:14:31,879

they can help make you feel better and

341

00:14:38,619 --> 00:14:36,139

so on but that doesn't mean that every

342

00:14:41,949 --> 00:14:38,629

idea or practice used for many years is

343

00:14:43,780 --> 00:14:41,959

therefore right or even real people have

344

00:14:46,920 --> 00:14:43,790

been doing it this way for generations

345

00:14:50,920 --> 00:14:46,930

if it worked for them it must be right

346

00:14:52,509 --> 00:14:50,930

maybe or maybe not for many years it was

347

00:14:55,569 --> 00:14:52,519

thought that bloodletting or bleeding

348

00:14:58,319 --> 00:14:55,579

sick people would help cure them this

349

00:15:01,720 --> 00:14:58,329

was done for generation after generation

350

00:15:04,660 --> 00:15:01,730

however we now know that this was far

351  
00:15:07,569 --> 00:15:04,670  
more harmful than helpful raw milk is

352  
00:15:09,819 --> 00:15:07,579  
safe to drink as our ancestors did so

353  
00:15:13,929 --> 00:15:09,829  
for thousands of years and they were

354  
00:15:16,329 --> 00:15:13,939  
fine firstly our ancestors did in fact

355  
00:15:19,869 --> 00:15:16,339  
sometimes become sick from drinking raw

356  
00:15:21,970 --> 00:15:19,879  
milk furthermore the Industrial

357  
00:15:24,720 --> 00:15:21,980  
Revolution resulted in increased

358  
00:15:27,100 --> 00:15:24,730  
transportation and storage times of milk

359  
00:15:27,730 --> 00:15:27,110  
rendering it less safe than when it was

360  
00:15:30,610 --> 00:15:27,740  
drunk

361  
00:15:32,800 --> 00:15:30,620  
the farm of origin this led to the

362  
00:15:35,380 --> 00:15:32,810  
development of pasteurization which

363  
00:15:38,590 --> 00:15:35,390

helped provide safe milk without any

364

00:15:40,920 --> 00:15:38,600

reduction in nutrition it has saved

365

00:15:43,660 --> 00:15:40,930

countless lives as it kills harmful

366

00:15:46,660 --> 00:15:43,670

organisms responsible for such diseases

367

00:15:51,190 --> 00:15:46,670

as lost arey osis typhoid fever

368

00:15:53,770 --> 00:15:51,200

tuberculosis and diphtheria foodborne

369

00:15:56,380 --> 00:15:53,780

illnesses are particularly dangerous for

370

00:15:59,230 --> 00:15:56,390

anyone with weakened immunity such as

371

00:16:02,800 --> 00:15:59,240

the elderly young children and pregnant

372

00:16:05,680 --> 00:16:02,810

women others with more robust immunity

373

00:16:08,110 --> 00:16:05,690

will probably survive food poisoning but

374

00:16:10,870 --> 00:16:08,120

it's an unnecessarily unpleasant

375

00:16:13,750 --> 00:16:10,880

experience that can be avoided by

376

00:16:17,080 --> 00:16:13,760

drinking pasteurized milk rather than

377

00:16:20,260 --> 00:16:17,090

raw milk just because a practice has

378

00:16:22,330 --> 00:16:20,270

existed for many generations that

379

00:16:26,380 --> 00:16:22,340

doesn't make the belief in the practice

380

00:16:29,140 --> 00:16:26,390

true homeopathy is hundreds of years old

381

00:16:32,290 --> 00:16:29,150

if it didn't work no one would use it

382

00:16:35,080 --> 00:16:32,300

yet millions of people rely on it and

383

00:16:37,690 --> 00:16:35,090

use it every day there is no doubt in

384

00:16:41,440 --> 00:16:37,700

the scientific community that homeopathy

385

00:16:43,540 --> 00:16:41,450

does not work and cannot work the

386

00:16:47,440 --> 00:16:43,550

principles on which it is based have

387

00:16:50,290 --> 00:16:47,450

been shown over the years to be false to

388

00:16:52,030 --> 00:16:50,300

be fair it was invented at a time when

389

00:16:54,910 --> 00:16:52,040

our knowledge of medicine and biology

390

00:16:56,840 --> 00:16:54,920

was far less sophisticated than it is

391

00:17:00,349 --> 00:16:56,850

today

392

00:17:02,809 --> 00:17:00,359

and by the way it does not matter how

393

00:17:06,499 --> 00:17:02,819

many people think something works or

394

00:17:09,379 --> 00:17:06,509

something is right that is known as the

395

00:17:16,549 --> 00:17:09,389

appeal to popularity and will be the

396

00:17:18,620 --> 00:17:16,559

subject of next week's segment knowing a

397

00:17:21,799 --> 00:17:18,630

logical fallacy when you hear one and

398

00:17:23,799 --> 00:17:21,809

even knowing its name is important when

399

00:17:26,809 --> 00:17:23,809

arguing your point of view

400

00:17:30,139 --> 00:17:26,819

however you may come across as arrogant

401

00:17:32,869 --> 00:17:30,149

and not get very far if you call it out

402

00:17:37,070 --> 00:17:32,879

by name to your opponent when you hear

403

00:17:39,950 --> 00:17:37,080

it being used if your opponent calls you

404

00:17:43,299 --> 00:17:39,960

out for using one it's time to stop and

405

00:17:46,070 --> 00:17:43,309

think about how you are making your case

406

00:17:49,639 --> 00:17:46,080

use your knowledge of logical fallacies

407

00:17:52,279 --> 00:17:49,649

wisely and remember that even if your

408

00:17:55,100 --> 00:17:52,289

point of view is right and you know all

409

00:17:57,440 --> 00:17:55,110

the pitfalls in arguing your case it

410

00:18:01,220 --> 00:17:57,450

doesn't always mean you'll win on the

411

00:18:07,310 --> 00:18:01,230

day and a skeptics we must also remember

412

00:18:09,289 --> 00:18:07,320

that we too can be wrong at times I'm

413

00:18:17,370 --> 00:18:09,299

Michele because mark from the Vick

414

00:18:32,950 --> 00:18:28,860

[Music]

415

00:18:36,010 --> 00:18:32,960

dr. Harriet Hall MD no into thousands as

416

00:18:39,100 --> 00:18:36,020

the skeptic a retired family physician

417

00:18:41,169 --> 00:18:39,110

and former Air Force flight surgeon she

418

00:18:42,870 --> 00:18:41,179

writes about medicine so-called

419

00:18:46,770 --> 00:18:42,880

complementary and alternative medicine

420

00:18:49,840 --> 00:18:46,780

science pakery and critical thinking

421

00:18:52,120 --> 00:18:49,850

Harriet now has a free course a series

422

00:18:55,450 --> 00:18:52,130

of 10 video lectures on science-based

423

00:18:57,490 --> 00:18:55,460

medicine and alternative medicine the

424

00:18:59,590 --> 00:18:57,500

videos and an accompanying course guide

425

00:19:04,450 --> 00:18:59,600

can be found by following the link at

426  
00:19:09,030 --> 00:19:04,460  
skeptical info or by visiting web Randi's

427  
00:19:12,780 --> 00:19:09,040  
org slash educational - modules dot

428  
00:19:15,040 --> 00:19:12,790  
html' topics covered in the series are

429  
00:19:16,330 --> 00:19:15,050  
science-based medicine vs.

430  
00:19:20,040 --> 00:19:16,340  
evidence-based medicine

431  
00:19:23,350 --> 00:19:20,050  
what is Kam chiropractic acupuncture

432  
00:19:26,110 --> 00:19:23,360  
homeopathy naturopathy and herbal

433  
00:19:28,840 --> 00:19:26,120  
medicine energy medicine miscellaneous

434  
00:19:31,840 --> 00:19:28,850  
alternatives pitfalls in research and

435  
00:19:35,560 --> 00:19:31,850  
science based medicine in the media and

436  
00:19:38,169 --> 00:19:35,570  
politics Harriette covers each topic in

437  
00:19:41,440 --> 00:19:38,179  
a matter-of-fact no-nonsense way that

438  
00:19:43,530 --> 00:19:41,450

shorter educate and entertain skeptic

439

00:20:04,800 --> 00:19:43,540

dot info

440

00:20:07,420 --> 00:20:04,810

[Music]

441

00:20:10,030 --> 00:20:07,430

now here's the latest update from the

442

00:20:13,600 --> 00:20:10,040

Australian skeptics the Australian

443

00:20:17,110 --> 00:20:13,610

skeptics ink or ASI newsletter number 92

444

00:20:22,060 --> 00:20:17,120

it starts off with save-the-date skeptic

445

00:20:27,550 --> 00:20:22,070

on 20/20 when the 23rd to the 25th of

446

00:20:30,610 --> 00:20:27,560

October 2020 where mantra on view 22

447

00:20:34,270 --> 00:20:30,620

view Avenue Surfers Paradise in

448

00:20:36,760 --> 00:20:34,280

Queensland skeptic on 2019 was such a

449

00:20:39,010 --> 00:20:36,770

big hit and I'm really looking forward

450

00:20:42,220 --> 00:20:39,020

to skeptic on 2020 the Australian

451  
00:20:46,390 --> 00:20:42,230  
skeptics National Convention the next

452  
00:20:49,570 --> 00:20:46,400  
item psychic day in court psychic medium

453  
00:20:51,670 --> 00:20:49,580  
Debby Malone believed she knew we're

454  
00:20:53,890 --> 00:20:51,680  
missing Sydney woman Lynette Dawson's

455  
00:20:57,070 --> 00:20:53,900  
body was buried after visiting her home

456  
00:20:59,350 --> 00:20:57,080  
on Sydney's Northern Beaches two decades

457  
00:21:02,020 --> 00:20:59,360  
after she vanished a full report

458  
00:21:03,940 --> 00:21:02,030  
including a legal opinion on the

459  
00:21:07,930 --> 00:21:03,950  
implications will be published in the

460  
00:21:10,750 --> 00:21:07,940  
March 2020 issue of the skeptic maps the

461  
00:21:13,900 --> 00:21:10,760  
journal from Australian skeptics next

462  
00:21:16,830 --> 00:21:13,910  
news item UK homeopaths accredited but

463  
00:21:19,390 --> 00:21:16,840

forbidden from offering autism treatment

464

00:21:22,840 --> 00:21:19,400

while the UK Professional Standards

465

00:21:24,970 --> 00:21:22,850

Authority PSA says it will be rewriting

466

00:21:27,520 --> 00:21:24,980

its accreditation of the Society of

467

00:21:30,100 --> 00:21:27,530

homeopaths there are conditions that its

468

00:21:32,920 --> 00:21:30,110

members can no longer claim to treat

469

00:21:34,690 --> 00:21:32,930

certain conditions homeopaths have been

470

00:21:37,450 --> 00:21:34,700

warned that they have three months to

471

00:21:40,270 --> 00:21:37,460

stop advertising therapies that claim to

472

00:21:42,490 --> 00:21:40,280

treat autism while the limitations are

473

00:21:44,620 --> 00:21:42,500

good news others such as the good at

474

00:21:46,600 --> 00:21:44,630

thinking society are disappointed that

475

00:21:48,940 --> 00:21:46,610

homeopathy will be receiving

476

00:21:51,040 --> 00:21:48,950

accreditation at all

477

00:21:53,950 --> 00:21:51,050

the good thinking society has legal

478

00:21:56,590 --> 00:21:53,960

advice that the 2019 accreditation of

479

00:21:59,470 --> 00:21:56,600

homeopaths was illegal and has taken out

480

00:22:02,080 --> 00:21:59,480

a legal challenge to that decision which

481

00:22:04,090 --> 00:22:02,090

is due to be heard by the UK High Court

482

00:22:06,760 --> 00:22:04,100

on March the 8th the good thinking

483

00:22:09,130 --> 00:22:06,770

society says that quote we need to take

484

00:22:11,950 --> 00:22:09,140

some time to carefully examine this new

485

00:22:14,440 --> 00:22:11,960

accreditation decision and to discuss

486

00:22:17,470 --> 00:22:14,450

with our legal team what implications it

487

00:22:20,320 --> 00:22:17,480

may have for our case other news items

488

00:22:23,200 --> 00:22:20,330

include atmospheric co2 helps plants

489

00:22:26,590 --> 00:22:23,210

grow but no excuse to downplay climate

490

00:22:29,350 --> 00:22:26,600

change also how Peter Brock's crystal

491

00:22:32,650 --> 00:22:29,360

obsession tour the Holden dealer team

492

00:22:35,170 --> 00:22:32,660

apart while we watch Holden disappear

493

00:22:37,780 --> 00:22:35,180

over the horizon on the motorway of life

494

00:22:39,280 --> 00:22:37,790

give a little thought to Peter Brock's

495

00:22:41,680 --> 00:22:39,290

crystal polarizer

496

00:22:44,500 --> 00:22:41,690

and his parting of the ways with Holden

497

00:22:46,980 --> 00:22:44,510

33 years ago and this is to do with

498

00:22:49,780 --> 00:22:46,990

so-called worgen energy one of these

499

00:22:51,010 --> 00:22:49,790

energies unknown to science that the

500

00:22:52,810 --> 00:22:51,020

Australian skeptics have been

501  
00:22:56,650 --> 00:22:52,820  
investigating for many years

502  
00:22:59,710 --> 00:22:56,660  
New Zealand comedian on aliens also are

503  
00:23:02,030 --> 00:22:59,720  
ghosts real tens scientific explanations

504  
00:23:06,200 --> 00:23:02,040  
for paranormal activity

505  
00:23:06,860 --> 00:23:06,210  
lastly Mad Mike Hughes dies in rocket

506  
00:23:09,680 --> 00:23:06,870  
crash

507  
00:23:12,740 --> 00:23:09,690  
eccentric flat earther proves the world

508  
00:23:16,430 --> 00:23:12,750  
is flat at least from his fatal point of

509  
00:23:19,100 --> 00:23:16,440  
view sad outcome because we have always

510  
00:23:21,200 --> 00:23:19,110  
used a few characters but almost

511  
00:23:26,720 --> 00:23:21,210  
inevitable considering his homemade

512  
00:23:28,850 --> 00:23:26,730  
rocket and distrust of science the March

513  
00:23:31,070 --> 00:23:28,860

2020 issue of the skeptic will be out

514

00:23:33,380 --> 00:23:31,080

soon with a feature on science

515

00:23:35,030 --> 00:23:33,390

pseudoscience and politicians not to

516

00:23:37,010 --> 00:23:35,040

mention science pseudoscience and

517

00:23:40,130 --> 00:23:37,020

business management how good our

518

00:23:44,060 --> 00:23:40,140

paranormalists practices and a good old

519

00:23:48,680 --> 00:23:44,070

fashioned UFO cult plus a lot more if

520

00:23:50,480 --> 00:23:48,690

you go to WWF XCOM au and scroll to the

521

00:23:52,760 --> 00:23:50,490

bottom of the page you too can sign up

522

00:24:06,820 --> 00:23:52,770

for this regular newsletter

523

00:24:13,090 --> 00:24:09,970

hi there I'm a VG's and I host the

524

00:24:16,990 --> 00:24:13,100

rational podcast on P rational calm

525

00:24:18,640 --> 00:24:17,000

what does rational mean after all simply

526  
00:24:20,740 --> 00:24:18,650  
that we need to be rational and

527  
00:24:23,080 --> 00:24:20,750  
reasonable in our beliefs and

528  
00:24:26,010 --> 00:24:23,090  
conversations we don't want to be trolls

529  
00:24:28,720 --> 00:24:26,020  
now do we plenty of them around anyway

530  
00:24:30,760 --> 00:24:28,730  
every couple of weeks I science the hell

531  
00:24:33,250 --> 00:24:30,770  
out of alternative medicines health and

532  
00:24:37,120 --> 00:24:33,260  
nutrition fads social media for words

533  
00:24:38,950 --> 00:24:37,130  
science news and lots more I wasn't

534  
00:24:42,220 --> 00:24:38,960  
always a skeptic and I'm definitely not

535  
00:24:44,650 --> 00:24:42,230  
a scientist so I use my lemons and my

536  
00:24:46,090 --> 00:24:44,660  
experiences to show how I've gotten

537  
00:24:48,250 --> 00:24:46,100  
better at using critical thinking

538  
00:24:51,250 --> 00:24:48,260

techniques to figure out the real from

539

00:24:53,140 --> 00:24:51,260

the fake and that you can - we all need

540

00:24:57,040 --> 00:24:53,150

to be better skeptics in this crazy

541

00:24:59,500 --> 00:24:57,050

world so join me a VG's on the rational

542

00:25:02,920 --> 00:24:59,510

podcast which is available on iTunes

543

00:25:04,870 --> 00:25:02,930

stitcher Google and pretty much any pod

544

00:25:06,790 --> 00:25:04,880

catcher you prefer you can also follow

545

00:25:09,250 --> 00:25:06,800

me on twitter and instagram at be

546

00:25:12,010 --> 00:25:09,260

rational or like my Facebook page at

547

00:25:14,980 --> 00:25:12,020

fashionable on Facebook you can also

548

00:25:17,680 --> 00:25:14,990

join rational conversations a group

549

00:25:19,330 --> 00:25:17,690

where we test our biases evil logical

550

00:25:21,910 --> 00:25:19,340

fallacies at the door and have

551  
00:25:25,180 --> 00:25:21,920  
conversations about science skepticism

552  
00:25:27,580 --> 00:25:25,190  
and our beliefs of course you can find

553  
00:25:32,340 --> 00:25:27,590  
all of my articles podcast episodes and

554  
00:25:36,070 --> 00:25:32,350  
lots more on [www.bayridgeford.com](http://www.bayridgeford.com)

555  
00:25:37,050 --> 00:25:36,080  
see you there and until then always be

556  
00:25:45,530 --> 00:25:37,060  
rational

557  
00:25:53,720 --> 00:25:50,460  
here's Maynard spooky action at a

558  
00:25:57,480 --> 00:25:55,770  
look I'm here out in the foyer it's a

559  
00:25:59,190 --> 00:25:57,490  
big thing it's been a big weekend one of

560  
00:26:00,690 --> 00:25:59,200  
the people is a major draw card here

561  
00:26:04,080 --> 00:26:00,700  
I've got with me right now who we got

562  
00:26:06,090 --> 00:26:04,090  
here it's me it's Cara Santa Maria you a

563  
00:26:08,070 --> 00:26:06,100

part of this is to you which is a huge

564

00:26:09,600 --> 00:26:08,080

draw card congratulation on selling out

565

00:26:10,650 --> 00:26:09,610

of books immediately I think I think I

566

00:26:12,150 --> 00:26:10,660

think you opened the box and they were

567

00:26:13,770 --> 00:26:12,160

gone I think that's how it worked

568

00:26:14,940 --> 00:26:13,780

apparently there are a few more coming

569

00:26:16,950 --> 00:26:14,950

in today but they'll probably be gone

570

00:26:18,240 --> 00:26:16,960

pretty quickly - how do you go when

571

00:26:19,560 --> 00:26:18,250

you're on the road as much as you out

572

00:26:21,240 --> 00:26:19,570

because you're hardly even on the show

573

00:26:22,860 --> 00:26:21,250

sometimes because you're very busy if

574

00:26:24,090 --> 00:26:22,870

you work in a PhD you've got all sorts

575

00:26:26,310 --> 00:26:24,100

of things going on you know people

576

00:26:27,780 --> 00:26:26,320

always ask if I love traveling all over

577

00:26:30,480 --> 00:26:27,790

the world and I always say I love it

578

00:26:32,640 --> 00:26:30,490

until I don't anymore it's a big fan of

579

00:26:34,140 --> 00:26:32,650

Africa I am I am and it's a ton of fun

580

00:26:37,110 --> 00:26:34,150

actually I was lucky enough earlier in

581

00:26:39,960 --> 00:26:37,120

the week that the Australian consulate

582

00:26:42,539 --> 00:26:39,970

to Namibia gave me a Friends of Namibia

583

00:26:44,490 --> 00:26:42,549

award oh I'm not sure what that does but

584

00:26:46,890 --> 00:26:44,500

it's pretty cool he's pretty positive

585

00:26:48,570 --> 00:26:46,900

thoughts about it when you when we do

586

00:26:49,799 --> 00:26:48,580

watch the news often it's not a good

587

00:26:50,909 --> 00:26:49,809

thing they don't say all there's being

588

00:26:52,500 --> 00:26:50,919

this development they or there's been

589

00:26:55,260 --> 00:26:52,510

these great roads opened it's always

590

00:26:57,570 --> 00:26:55,270

people seek yeah I also think that most

591

00:26:59,970 --> 00:26:57,580

people in the West think of Africa as a

592

00:27:01,470 --> 00:26:59,980

country they don't understand quite how

593

00:27:03,090 --> 00:27:01,480

diverse it is and quite how many

594

00:27:05,460 --> 00:27:03,100

different languages are spoken different

595

00:27:06,990 --> 00:27:05,470

cultural groups are there and gosh it's

596

00:27:08,700 --> 00:27:07,000

there's so many beautiful countries in

597

00:27:10,049 --> 00:27:08,710

Africa I've been asking for your

598

00:27:11,640 --> 00:27:10,059

questions about skepticism when I was

599

00:27:12,900 --> 00:27:11,650

looking at the event spoon award that

600

00:27:15,539 --> 00:27:12,910

the skeptics give out reading press

601  
00:27:17,130 --> 00:27:15,549  
releases from the 70s through in the

602  
00:27:19,110 --> 00:27:17,140  
early 70s in the 80s

603  
00:27:21,390 --> 00:27:19,120  
dolphins got mentioned a lot with the

604  
00:27:22,830 --> 00:27:21,400  
paranormal and dolphins just stopped

605  
00:27:24,600 --> 00:27:22,840  
being mentioned in the early eighties

606  
00:27:26,690 --> 00:27:24,610  
why do you think dolphins were big with

607  
00:27:29,280 --> 00:27:26,700  
the paranormal set not now

608  
00:27:30,510 --> 00:27:29,290  
maybe it's because they're well I don't

609  
00:27:32,430 --> 00:27:30,520  
know why they wouldn't be mentioned now

610  
00:27:34,080 --> 00:27:32,440  
but I think there has always been like

611  
00:27:36,000 --> 00:27:34,090  
an interest in dolphins because they're

612  
00:27:37,680 --> 00:27:36,010  
really intelligent and so a lot of

613  
00:27:39,180 --> 00:27:37,690

people do you remember the one that

614

00:27:40,620 --> 00:27:39,190

people are doing like dolphin therapy

615

00:27:43,020 --> 00:27:40,630

and they were trying to like communicate

616

00:27:45,299 --> 00:27:43,030

with dolphins and things like that

617

00:27:46,710 --> 00:27:45,309

that's pretty funny actually what why do

618

00:27:48,419 --> 00:27:46,720

you think that's not popular I was

619

00:27:50,940 --> 00:27:48,429

thinking we've got a dolphins of the

620

00:27:52,590 --> 00:27:50,950

gaps here because science has told

621

00:27:54,000 --> 00:27:52,600

people what's going on with dolphins not

622

00:27:55,850 --> 00:27:54,010

completely but it's maybe filled in

623

00:27:57,560 --> 00:27:55,860

those gaps and people go okay

624

00:27:59,120 --> 00:27:57,570

yeah dolphins are going on to the

625

00:28:01,070 --> 00:27:59,130

unicorn here the dolphins at the gap

626

00:28:02,480 --> 00:28:01,080

unicorn of the gaps is much busy there

627

00:28:03,919 --> 00:28:02,490

what is the latest thing that you've

628

00:28:06,320 --> 00:28:03,929

come into with skepticism

629

00:28:08,150 --> 00:28:06,330

I mean Wu goes in circles but is there a

630

00:28:11,900 --> 00:28:08,160

new one that's come up and you're gone

631

00:28:14,570 --> 00:28:11,910

new I mean very very new let's think

632

00:28:15,950 --> 00:28:14,580

about that I think some of the medical

633

00:28:18,010 --> 00:28:15,960

Wu they always get really really

634

00:28:20,539 --> 00:28:18,020

creative right so like the tumeric

635

00:28:22,669 --> 00:28:20,549

infusions and some of these kind of

636

00:28:24,140 --> 00:28:22,679

woowoo medical things where they used to

637

00:28:25,520 --> 00:28:24,150

just put it in your latte and now you

638

00:28:27,020 --> 00:28:25,530

want to just like inject it straight

639

00:28:28,940 --> 00:28:27,030

into your veins think we're gonna be

640

00:28:30,200 --> 00:28:28,950

careful about that people like Sam

641

00:28:32,419 --> 00:28:30,210

Harris that are having a spiritual

642

00:28:34,789 --> 00:28:32,429

journey with DMT and things like that do

643

00:28:37,340 --> 00:28:34,799

you think that's an old thing returning

644

00:28:38,810 --> 00:28:37,350

or something new I mean I think that I'm

645

00:28:41,000 --> 00:28:38,820

of two minds about that because I do

646

00:28:43,100 --> 00:28:41,010

think that people take it too far and

647

00:28:43,909 --> 00:28:43,110

they get into the whoo but I also think

648

00:28:46,390 --> 00:28:43,919

that there's some really interesting

649

00:28:48,590 --> 00:28:46,400

stuff that we haven't really

650

00:28:50,000 --> 00:28:48,600

psychologically speaking some of these

651

00:28:51,860 --> 00:28:50,010

psychedelics actually do have

652

00:28:54,620 --> 00:28:51,870

interesting effects on individual so

653

00:28:56,750 --> 00:28:54,630

things like psilocybin maybe DMT but

654

00:28:59,210 --> 00:28:56,760

more psilocybin and MDMA in people who

655

00:29:01,700 --> 00:28:59,220

are approaching death they've actually

656

00:29:03,560 --> 00:29:01,710

shown really positive outcomes PTSD for

657

00:29:04,909 --> 00:29:03,570

example positive outcomes there so I

658

00:29:06,950 --> 00:29:04,919

think it's one of those things like a

659

00:29:09,289 --> 00:29:06,960

lot of pseudoscience where there's a

660

00:29:12,799 --> 00:29:09,299

kernel of truth and so then people take

661

00:29:15,140 --> 00:29:12,809

it to be like with CBT or th see that it

662

00:29:18,200 --> 00:29:15,150

just cures everything um and no it

663

00:29:21,710 --> 00:29:18,210

doesn't what's your like when people got

664

00:29:22,789 --> 00:29:21,720

gotcha MS skeptic how do you snap back

665

00:29:24,200 --> 00:29:22,799

at people like that because they

666

00:29:24,860 --> 00:29:24,210

normally go for a gap thing that you

667

00:29:27,289 --> 00:29:24,870

can't explain

668

00:29:28,520 --> 00:29:27,299

I've tried not to snap back too much and

669

00:29:30,590 --> 00:29:28,530

I try to really take the time to

670

00:29:33,080 --> 00:29:30,600

understand where those people are coming

671

00:29:35,360 --> 00:29:33,090

from you know I don't experience too

672

00:29:37,520 --> 00:29:35,370

much of the gotchas because I also don't

673

00:29:39,230 --> 00:29:37,530

got you to other people very often so I

674

00:29:42,049 --> 00:29:39,240

think for me what's important is

675

00:29:43,430 --> 00:29:42,059

understanding why somebody is so hook

676

00:29:45,950 --> 00:29:43,440

line and sinker especially in Los

677

00:29:48,530 --> 00:29:45,960

Angeles where I live for kind of the the

678

00:29:50,419 --> 00:29:48,540

food and the anti medical whoo this is a

679

00:29:53,000 --> 00:29:50,429

new one there yeah well it's just very

680

00:29:54,740 --> 00:29:53,010

kind of new agey hippie like the green

681

00:29:57,020 --> 00:29:54,750

juices and the detoxes and the whatever

682

00:29:59,740 --> 00:29:57,030

and so it's trying to understand where

683

00:30:02,530 --> 00:29:59,750

are they coming from why are they

684

00:30:04,920 --> 00:30:02,540

why are they so attached to this so that

685

00:30:06,940 --> 00:30:04,930

maybe I can meet them where they are

686

00:30:09,820 --> 00:30:06,950

almost just talking to someone earlier

687

00:30:11,290 --> 00:30:09,830

there with the the Instagram influences

688

00:30:12,910 --> 00:30:11,300

having it like they've taken over from

689

00:30:13,930 --> 00:30:12,920

women's magazines to a certain extent so

690

00:30:15,670 --> 00:30:13,940

while you're waiting in the checkout

691

00:30:16,600 --> 00:30:15,680

instead of seeing the magazines you'll

692

00:30:18,220 --> 00:30:16,610

be looking your phone and seeing these

693

00:30:19,780 --> 00:30:18,230

fabulous people that have crystals that

694

00:30:20,950 --> 00:30:19,790

are doing things for them and that how

695

00:30:22,510 --> 00:30:20,960

are you gonna find that that's a tough

696

00:30:24,760 --> 00:30:22,520

one I know especially like what are

697

00:30:26,620 --> 00:30:24,770

their they're like the celery diet and

698

00:30:28,240 --> 00:30:26,630

the celery water and everything gosh

699

00:30:29,800 --> 00:30:28,250

it's tough right because you see these

700

00:30:31,210 --> 00:30:29,810

people that are really beautiful that

701  
00:30:33,040 --> 00:30:31,220  
have a lot of followers and you just

702  
00:30:34,870 --> 00:30:33,050  
really want to be like them and well

703  
00:30:36,850 --> 00:30:34,880  
maybe if I just drink celery water I'm

704  
00:30:39,010 --> 00:30:36,860  
gonna be hot and and rich and famous

705  
00:30:42,550 --> 00:30:39,020  
just like her you had their parents with

706  
00:30:44,140 --> 00:30:42,560  
the DNA yeah yeah it's like yeah I think

707  
00:30:46,000 --> 00:30:44,150  
this is a function of internet culture

708  
00:30:47,920 --> 00:30:46,010  
and a fomo kind of fear of missing out

709  
00:30:49,510 --> 00:30:47,930  
culture and always wanting to be it's

710  
00:30:50,920 --> 00:30:49,520  
just the new celebrities I don't think

711  
00:30:52,300 --> 00:30:50,930  
it's any different than the celebrities

712  
00:30:53,650 --> 00:30:52,310  
on the magazine speaking of celebrities

713  
00:30:55,390 --> 00:30:53,660

how you get on with the rest of the

714

00:30:57,130 --> 00:30:55,400

that could be difficult I mean

715

00:30:59,980 --> 00:30:57,140

it'll go to their heads okay sleeps

716

00:31:01,450 --> 00:30:59,990

great but a troublemaker look he should

717

00:31:03,220 --> 00:31:01,460

be studying now and he's looking at some

718

00:31:04,890 --> 00:31:03,230

old Tintin coming yeah that barely fits

719

00:31:07,120 --> 00:31:04,900

through the door down the met his head

720

00:31:09,040 --> 00:31:07,130

look have a good time and if so is there

721

00:31:10,330 --> 00:31:09,050

one sentence that any anyone can carry

722

00:31:11,500 --> 00:31:10,340

into their day to give a critical

723

00:31:12,940 --> 00:31:11,510

thinking aspect to it

724

00:31:14,500 --> 00:31:12,950

whenever they're confronted by something

725

00:31:17,860 --> 00:31:14,510

I thought you might have a simple mantra

726

00:31:20,610 --> 00:31:17,870

I would say be skeptical and use empathy

727

00:31:22,870 --> 00:31:20,620

thank you thank you very much thank you

728

00:31:24,580 --> 00:31:22,880

what's been your favorite thing all

729

00:31:27,160 --> 00:31:24,590

weekend here at skeptic on well I

730

00:31:28,960 --> 00:31:27,170

actually went and saw the for the

731

00:31:31,090 --> 00:31:28,970

skeptics died and I got to meet them end

732

00:31:33,460 --> 00:31:31,100

up buying everything fine did you get a

733

00:31:35,050 --> 00:31:33,470

book did you yeah I got a book how did

734

00:31:36,790 --> 00:31:35,060

you do that because basically as soon as

735

00:31:38,590 --> 00:31:36,800

the box was open it was empty how did

736

00:31:40,880 --> 00:31:38,600

you manage to get that my boyfriend

737

00:31:43,550 --> 00:31:40,890

actually bought me one months ago

738

00:31:45,470 --> 00:31:43,560

you did the AFL jump of everybody to get

739

00:31:47,660 --> 00:31:45,480

the book did he pretty much well it was

740

00:31:50,450 --> 00:31:47,670

in April when was Beth Davis oh I got it

741

00:31:52,460 --> 00:31:50,460

Mike China was a great fun to meet that

742

00:31:53,300 --> 00:31:52,470

were they I have to ask this oh no it's

743

00:31:55,310 --> 00:31:53,310

an odd question

744

00:31:57,020 --> 00:31:55,320

were they in any way different in person

745

00:31:58,580 --> 00:31:57,030

as you thought they might be because to

746

00:32:01,880 --> 00:31:58,590

one my friendship we have with people on

747

00:32:04,700 --> 00:32:01,890

a podcast didn't really know what they

748

00:32:06,800 --> 00:32:04,710

looked like but when I saw Evan

749

00:32:11,420 --> 00:32:06,810

Bernstein I was like oh my god it's Adam

750

00:32:13,190 --> 00:32:11,430

Savage yes I when I first saw him when

751  
00:32:14,660 --> 00:32:13,200  
he arrived I just I decide not to make

752  
00:32:17,120 --> 00:32:14,670  
that joke you could get away with it but

753  
00:32:18,770 --> 00:32:17,130  
that yes it's the beard isn't it it is

754  
00:32:20,960 --> 00:32:18,780  
definitely the beard and I also look

755  
00:32:23,030 --> 00:32:20,970  
like Daisy Ridley so I've got a photo of

756  
00:32:25,520 --> 00:32:23,040  
him and me looking it looks like he

757  
00:32:28,360 --> 00:32:25,530  
looks like Adam Savage I look like Daisy

758  
00:32:32,240 --> 00:32:28,370  
Ridley so we've got like a doppelganger

759  
00:32:33,800 --> 00:32:32,250  
and look JJ Novello is like Jay Novello

760  
00:32:35,870 --> 00:32:33,810  
really isn't he like me pretty much yeah

761  
00:32:37,400 --> 00:32:35,880  
you expect this is pretty much ya know

762  
00:32:39,710 --> 00:32:37,410  
they're all very lovely people well

763  
00:32:40,490 --> 00:32:39,720

enjoy the rest of your afternoon okay

764

00:32:43,340 --> 00:32:40,500

thank you

765

00:32:46,100 --> 00:32:43,350

well of course the heart and soul of any

766

00:32:47,870 --> 00:32:46,110

great skeptical group selling merch is

767

00:32:48,440 --> 00:32:47,880

the person the merch table who have we

768

00:32:51,380 --> 00:32:48,450

got here

769

00:32:53,930 --> 00:32:51,390

Jennifer Bernstein Evans wife oh right

770

00:32:55,940 --> 00:32:53,940

and um so does him have you do this very

771

00:32:57,680 --> 00:32:55,950

often as often as possible

772

00:33:01,010 --> 00:32:57,690

so what do you like as a salesperson

773

00:33:02,900 --> 00:33:01,020

meeting people oh okay cool

774

00:33:04,580 --> 00:33:02,910

and what do you what do you got left

775

00:33:06,050 --> 00:33:04,590

here cuz we've all talked about the

776

00:33:07,940 --> 00:33:06,060

whole bakery as soon as you open the box

777

00:33:10,310 --> 00:33:07,950

the books were gone really really they

778

00:33:13,280 --> 00:33:10,320

sold very quickly so after their private

779

00:33:14,960 --> 00:33:13,290

show we sold a ton of books and and then

780

00:33:17,780 --> 00:33:14,970

we had to scramble to get the last nine

781

00:33:21,140 --> 00:33:17,790

in Melbourne to arrive here this morning

782

00:33:23,330 --> 00:33:21,150

and now they're gone some t-shirts left

783

00:33:25,340 --> 00:33:23,340

yes I think yeah and what seems to be

784

00:33:27,140 --> 00:33:25,350

the thing that everyone goes for if

785

00:33:32,300 --> 00:33:27,150

there's no book spins or what um

786

00:33:35,060 --> 00:33:32,310

pens and what are these called coins Oh

787

00:33:38,690 --> 00:33:35,070

challenge coins yes oh that go for the

788

00:33:41,960 --> 00:33:38,700

coins the pins have been pens and pins

789

00:33:44,060 --> 00:33:41,970

have been selling oh Ivy now I spoke to

790

00:33:45,770 --> 00:33:44,070

Jay I said Jay what can't you move and

791

00:33:47,900 --> 00:33:45,780

they said look we bought far too many of

792

00:33:49,610 --> 00:33:47,910

the Power Balance bands of our and you

793

00:33:52,250 --> 00:33:49,620

buy the other they bought too many they

794

00:33:54,260 --> 00:33:52,260

I was talking to a gentleman earlier he

795

00:33:55,820 --> 00:33:54,270

said that he bought one and he wears it

796

00:33:57,860 --> 00:33:55,830

but he never gets to talk about it

797

00:33:59,990 --> 00:33:57,870

because they assume that it's a power

798

00:34:01,310 --> 00:34:00,000

band it's a real one and I was like you

799

00:34:02,930 --> 00:34:01,320

have to tell them that's an anti power

800

00:34:05,270 --> 00:34:02,940

band yes exactly

801  
00:34:07,040 --> 00:34:05,280  
that was procedure band I believe they

802  
00:34:08,780 --> 00:34:07,050  
were called as we are yes okay what's

803  
00:34:10,250 --> 00:34:08,790  
your word that get on because you got to

804  
00:34:12,859 --> 00:34:10,260  
put up with this at home all the time so

805  
00:34:14,990 --> 00:34:12,869  
really you're being incredulous about

806  
00:34:16,490 --> 00:34:15,000  
something again are you so how does it

807  
00:34:18,169 --> 00:34:16,500  
go I mean do you ever say enough of the

808  
00:34:22,570 --> 00:34:18,179  
skepticism let's just gonna go with what

809  
00:34:25,190 --> 00:34:22,580  
we believe for the next hour or not know

810  
00:34:27,950 --> 00:34:25,200  
when Evan and I started dating here's a

811  
00:34:29,450 --> 00:34:27,960  
little snippet for everyone he um he put

812  
00:34:30,800 --> 00:34:29,460  
me through a little test to see if I was

813  
00:34:33,080 --> 00:34:30,810

a critical thinker Wow

814

00:34:35,180 --> 00:34:33,090

okay well let let us maybe do this at

815

00:34:36,619 --> 00:34:35,190

home and what did he do and how did you

816

00:34:38,960 --> 00:34:36,629

react to it cuz I gotta say that's a bit

817

00:34:41,960 --> 00:34:38,970

of a test I mean really yeah we on our

818

00:34:44,600 --> 00:34:41,970

first date we're out to dinner and um he

819

00:34:47,050 --> 00:34:44,610

asked me when my birthday was and I said

820

00:34:49,340 --> 00:34:47,060

it's in November and he did this whole

821

00:34:50,330 --> 00:34:49,350

little like cold reading thing ago like

822

00:34:54,169 --> 00:34:50,340

this what are you doing you trying to

823

00:34:56,540 --> 00:34:54,179

test me he laughed he goes yeah and I

824

00:34:57,800 --> 00:34:56,550

was like well I don't I don't know what

825

00:35:00,260 --> 00:34:57,810

I don't know what to say to that

826

00:35:03,950 --> 00:35:00,270

I don't my birthday is in November 3rd

827

00:35:06,760 --> 00:35:03,960

and I don't what are we doing so he knew

828

00:35:09,650 --> 00:35:06,770

that we could date for a length of time

829

00:35:12,200 --> 00:35:09,660

that I wasn't the other girls who have

830

00:35:14,480 --> 00:35:12,210

done the you know I believe in ghosts or

831

00:35:17,180 --> 00:35:14,490

I believe in mediums or right I was a

832

00:35:18,200 --> 00:35:17,190

girl who was gonna write I'm just yeah

833

00:35:19,760 --> 00:35:18,210

exactly

834

00:35:21,530 --> 00:35:19,770

I would have thought is Connecticut more

835

00:35:23,120 --> 00:35:21,540

where we are California's you would

836

00:35:25,190 --> 00:35:23,130

capital there I mean a car would have a

837

00:35:27,080 --> 00:35:25,200

trouble getting a date that is up more

838

00:35:28,099 --> 00:35:27,090

in California than you would in kinetic

839

00:35:30,710 --> 00:35:28,109

I thought there might be a bit more

840

00:35:32,359 --> 00:35:30,720

skeptical Aegean in there you know I I'm

841

00:35:35,140 --> 00:35:32,369

not really sure if there's more or less

842

00:35:40,400 --> 00:35:35,150

but California certainly is whoot astok

843

00:35:41,750 --> 00:35:40,410

absolutely lots of ghost houses up that

844

00:35:44,030 --> 00:35:41,760

way don't you well in Connecticut

845

00:35:46,820 --> 00:35:44,040

because it's one of the 13 colonies from

846

00:35:48,800 --> 00:35:46,830

England right it's old and so people

847

00:35:52,310 --> 00:35:48,810

like you know this is haunted or that is

848

00:35:54,170 --> 00:35:52,320

haunted or if you've read Evans chapter

849

00:35:58,190 --> 00:35:54,180

in their book it's about at a little

850

00:36:00,050 --> 00:35:58,200

activity local being sold well check out

851

00:36:01,080 --> 00:36:00,060

Evans chapter in their book he talks

852

00:36:04,890 --> 00:36:01,090

about Eden

853

00:36:06,930 --> 00:36:04,900

Warren who yeah yep

854

00:36:09,450 --> 00:36:06,940

and I was always big fan of the old

855

00:36:12,330 --> 00:36:09,460

radio showed Johnny dollar who was the

856

00:36:14,580 --> 00:36:12,340

insurance investigator with the amazing

857

00:36:16,890 --> 00:36:14,590

expense account it ran from the 30s

858

00:36:19,440 --> 00:36:16,900

through to the 50s 70s and he was based

859

00:36:21,060 --> 00:36:19,450

in Hartford Connecticut which I'm told

860

00:36:22,620 --> 00:36:21,070

is insurance capital and just a little

861

00:36:24,560 --> 00:36:22,630

bit dull is it full of insurance

862

00:36:27,930 --> 00:36:24,570

salesman Hartford Connecticut or not

863

00:36:30,660 --> 00:36:27,940

insurance salesman and lawyers oh they

864

00:36:32,250 --> 00:36:30,670

go together really where one and follows

865

00:36:33,990 --> 00:36:32,260

the other one's got to go hey there

866

00:36:37,910 --> 00:36:34,000

might be some claims here I can chase

867

00:36:42,600 --> 00:36:40,230

okay so you're thinking on the map of

868

00:36:44,850 --> 00:36:42,610

America one of the exciting places might

869

00:36:46,470 --> 00:36:44,860

not be Hartford might not be on that map

870

00:36:48,840 --> 00:36:46,480

it wouldn't be on that map I wouldn't

871

00:36:54,240 --> 00:36:48,850

say it's a Hartford if something Las

872

00:36:59,550 --> 00:36:57,780

well I'd sense a sense oh look I look to

873

00:37:01,050 --> 00:36:59,560

me New York is that I love it so much

874

00:37:02,520 --> 00:37:01,060

fun Los Angeles because everything in

875

00:37:04,320 --> 00:37:02,530

the Western world is there the good the

876

00:37:06,000 --> 00:37:04,330

bad the I believe everything and you can

877

00:37:07,620 --> 00:37:06,010

walk out your door in your hotel or if

878

00:37:11,580 --> 00:37:07,630

you live there and have an adventure

879

00:37:12,570 --> 00:37:11,590

good or bad at any time absolutely in

880

00:37:14,610 --> 00:37:12,580

New York never sleeps

881

00:37:16,710 --> 00:37:14,620

it really is it's true it never sleeps

882

00:37:18,330 --> 00:37:16,720

okay unlike Sydney we've had to go to

883

00:37:22,170 --> 00:37:18,340

bed at 6 o'clock at night now you know

884

00:37:23,460 --> 00:37:22,180

yeah yeah Melbourne seems to I've

885

00:37:25,140 --> 00:37:23,470

enjoyed watching the difference between

886

00:37:27,480 --> 00:37:25,150

the workweek in the weekend the weekend

887

00:37:30,840 --> 00:37:27,490

gets a little sleepy er here yeah a bit

888

00:37:34,350 --> 00:37:30,850

like downtown LA yeah yeah and um but I

889

00:37:36,660 --> 00:37:34,360

can see the observe the ferris wheel do

890

00:37:38,580 --> 00:37:36,670

you know the observation wheel so I

891

00:37:39,960 --> 00:37:38,590

enjoy that light show every night Wow

892

00:37:42,840 --> 00:37:39,970

so you must be enjoying never seen a

893

00:37:44,850 --> 00:37:42,850

turn does the wheel turn I couldn't tell

894

00:37:46,620 --> 00:37:44,860

you um it might be having a quiet

895

00:37:48,120 --> 00:37:46,630

weekend or something but you must get

896

00:37:49,560 --> 00:37:48,130

around the world doing this skeptical

897

00:37:51,450 --> 00:37:49,570

thing is it anyway where you've gone

898

00:37:54,650 --> 00:37:51,460

you're thought wow this is this is bit

899

00:37:57,090 --> 00:37:54,660

wilder than I thought Wilder done yeah

900

00:37:58,200 --> 00:37:57,100

you know they get such a reaction

901  
00:38:00,660 --> 00:37:58,210  
wherever they go

902  
00:38:03,660 --> 00:38:00,670  
made art it's really a joy to kind of

903  
00:38:06,810 --> 00:38:03,670  
watch them take off I was telling

904  
00:38:08,100 --> 00:38:06,820  
Jessica before that I've been there

905  
00:38:10,530 --> 00:38:08,110  
since the beginning so I remember

906  
00:38:12,790 --> 00:38:10,540  
sitting in Steve's living room when they

907  
00:38:16,900 --> 00:38:12,800  
were the New England's captain

908  
00:38:19,360 --> 00:38:16,910  
society and doesn't sound nerdy you

909  
00:38:21,490 --> 00:38:19,370  
think I tell you some things and

910  
00:38:23,620 --> 00:38:21,500  
stapling the news letters right and

911  
00:38:25,330 --> 00:38:23,630  
getting them ready to be mailed so that

912  
00:38:27,120 --> 00:38:25,340  
was you know we would sit in Steve's

913  
00:38:30,340 --> 00:38:27,130

living room and we would have dinner and

914

00:38:32,910 --> 00:38:30,350

it's kind of how the podcast was born

915

00:38:35,650 --> 00:38:32,920

sitting around Steve's dining room table

916

00:38:37,030 --> 00:38:35,660

that is a mess and now you hear you are

917

00:38:40,120 --> 00:38:37,040

sitting around someone's dining room

918

00:38:41,920 --> 00:38:40,130

tile in Melbourne and selling merch

919

00:38:43,150 --> 00:38:41,930

looking forward to seeing you later and

920

00:38:44,950 --> 00:38:43,160

good luck with the merch and see if you

921

00:38:46,630 --> 00:38:44,960

can really move those wristbands JJ's

922

00:38:59,280 --> 00:38:46,640

getting surety about them I'll work on

923

00:39:04,750 --> 00:39:02,830

Alaura ciao mi chiamo profesora de vo2

924

00:39:08,080 --> 00:39:04,760

volume incendiary - teleca's sulla

925

00:39:09,190 --> 00:39:08,090

shines para la moda physica de chemica

926

00:39:13,480 --> 00:39:09,200

bureau gia

927

00:39:16,300 --> 00:39:13,490

astronomia Mathematica atonte ultra cozy

928

00:39:18,520 --> 00:39:16,310

guarda me su YouTube arrivederci

929

00:39:20,200 --> 00:39:18,530

hey everyone this is Professor Dave I

930

00:39:21,940 --> 00:39:20,210

want to teach you about all kinds of

931

00:39:23,890 --> 00:39:21,950

things regarding science I want to tell

932

00:39:27,310 --> 00:39:23,900

you about physics I want to tell you

933

00:39:30,040 --> 00:39:27,320

about chemistry biology astronomy math

934

00:39:31,720 --> 00:39:30,050

and many many more things come check me

935

00:39:37,660 --> 00:39:31,730

out on youtube the channel is called

936

00:39:54,500 --> 00:39:38,840

[Applause]

937

00:39:56,420 --> 00:39:54,510

thank you for listening to the skeptic

938

00:39:59,240 --> 00:39:56,430

zone now we've had a wonderful day at

939

00:40:01,880 --> 00:39:59,250

skeptic camp on the Surf Coast I'm here

940

00:40:05,630 --> 00:40:01,890

with some likely skeptics at beware Ally

941

00:40:07,460 --> 00:40:05,640

Michelle with Aries pub the Aries pub

942

00:40:11,030 --> 00:40:07,470

we're just winding down did you have a

943

00:40:13,270 --> 00:40:11,040

good sceptic am steve roberts yeah I did

944

00:40:16,700 --> 00:40:13,280

which should be tested this Bazaar wine

945

00:40:18,620 --> 00:40:16,710

improving card very great fun doing that

946

00:40:20,569 --> 00:40:18,630

we did an a report will be coming up on

947

00:40:23,930 --> 00:40:20,579

the next episode of the skeptic zone

948

00:40:26,690 --> 00:40:23,940

luckily after hear this we're going back

949

00:40:27,230 --> 00:40:26,700

to your place I think for some wine and

950

00:40:33,079 --> 00:40:27,240

peanuts

951  
00:40:35,240 --> 00:40:33,089  
the wine card to test the wine as well

952  
00:40:36,740 --> 00:40:35,250  
using that we should have a peanut card

953  
00:40:39,500 --> 00:40:36,750  
I think the peanut card was a good idea

954  
00:40:41,270 --> 00:40:39,510  
yeah my microphone card anyway it's a

955  
00:40:43,430 --> 00:40:41,280  
wonderful time here at this part of the

956  
00:40:45,530 --> 00:40:43,440  
world tune in to the next episode of the

957  
00:40:47,210 --> 00:40:45,540  
skeptic zone for a full report on scary

958  
00:40:48,950 --> 00:40:47,220  
camp but for now this is Richard

959  
00:40:56,660 --> 00:40:48,960  
Saunders signing off from heir Lee's

960  
00:40:59,450 --> 00:40:56,670  
Inlet Victoria you've been listening to

961  
00:41:04,220 --> 00:40:59,460  
the skeptic zone podcast please visit

962  
00:41:07,520 --> 00:41:04,230  
our website at WWDC be for show notes

963  
00:41:11,720 --> 00:41:07,530

contacts and to access the bat catalog

964

00:41:13,430 --> 00:41:11,730

of episodes going back to 2008 you can

965

00:41:16,490 --> 00:41:13,440

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966

00:41:18,770 --> 00:41:16,500

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967

00:41:22,130 --> 00:41:18,780

facebook page or leave a review on

968

00:41:25,520 --> 00:41:22,140

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969

00:41:27,859 --> 00:41:25,530

zone via patreon or PayPal the skeptic

970

00:41:29,809 --> 00:41:27,869

zone podcast is an independent

971

00:41:32,000 --> 00:41:29,819

production reviews and opinions

972

00:41:34,160 --> 00:41:32,010

expressed on the skeptic zone are not

973

00:41:37,090 --> 00:41:34,170

necessarily those of Australian skeptics

974

00:41:48,170 --> 00:41:37,100

or any other skeptical organisation

975

00:41:53,609 --> 00:41:51,150

well folks I'm here at Anglesey in

976  
00:41:57,270 --> 00:41:53,619  
Victoria oh there's another one where

977  
00:41:58,730 --> 00:41:57,280  
the fourth or fifth one and about where

978  
00:42:02,550 --> 00:41:58,740  
it's coming to them I'm with Steve

979  
00:42:04,260 --> 00:42:02,560  
exciting it's gone it's gone and Steve

980  
00:42:05,790 --> 00:42:04,270  
we're looking up the night sky here at

981  
00:42:10,079 --> 00:42:05,800  
angles where where

982  
00:42:12,359 --> 00:42:10,089  
oh there it is yeah yeah it'll disappear

983  
00:42:14,520 --> 00:42:12,369  
what are we talking about we are talking

984  
00:42:17,069 --> 00:42:14,530  
about satellites because the viewing the

985  
00:42:20,040 --> 00:42:17,079  
sky here at angles seen Victoria

986  
00:42:25,349 --> 00:42:20,050  
it's gone no it's there look I can see

987  
00:42:27,329 --> 00:42:25,359  
it it's another one I have never seen so

988  
00:42:29,099 --> 00:42:27,339

many satellites in my life they're all

989

00:42:35,120 --> 00:42:29,109

streaming above us and they all

990

00:42:38,190 --> 00:42:35,130

disappear about about no little fade on

991

00:42:40,020 --> 00:42:38,200

there it is gone you're hiding no it's

992

00:42:41,609 --> 00:42:40,030

gone Steve why are these satellites

993

00:42:43,890 --> 00:42:41,619

disappearing and why there's so many

994

00:42:45,630 --> 00:42:43,900

well there were many satellites you see

995

00:42:47,940 --> 00:42:45,640

5 volts Heather now normally but was

996

00:42:49,380 --> 00:42:47,950

thinking the incredible number now but

997

00:42:50,970 --> 00:42:49,390

the Earth's shadow is there the sun's

998

00:42:53,160 --> 00:42:50,980

down there into the left to where we're

999

00:42:54,720 --> 00:42:53,170

sitting so your shadows up there under

1000

00:42:56,550 --> 00:42:54,730

the right when the satellites move into

1001  
00:42:58,230 --> 00:42:56,560  
that they move into the Earth's shadow

1002  
00:42:59,849 --> 00:42:58,240  
from the Sun and there's no light

1003  
00:43:01,470 --> 00:42:59,859  
shining on them so you can't see them

1004  
00:43:03,900 --> 00:43:01,480  
but we've just seen a parade of what

1005  
00:43:05,970 --> 00:43:03,910  
seven in a row in a row yeah well

1006  
00:43:09,059 --> 00:43:05,980  
there's there's like 70,000 up there or

1007  
00:43:12,089 --> 00:43:09,069  
something some vast number and some of

1008  
00:43:13,950 --> 00:43:12,099  
summer bright some uh some are not so

1009  
00:43:16,410 --> 00:43:13,960  
much you have a sort of flat metal panel

1010  
00:43:18,150 --> 00:43:16,420  
on them's and the term so as the metal

1011  
00:43:22,079 --> 00:43:18,160  
panel tones you get this flash of

1012  
00:43:24,690 --> 00:43:22,089  
intense sunlight you think that well all

1013  
00:43:28,470 --> 00:43:24,700

those satellites were disappearing is a

1014

00:43:30,859 --> 00:43:28,480

in Ed's a in the vicinity of Orion right

1015

00:43:32,790 --> 00:43:30,869

so we are guessing or it's a good

1016

00:43:35,970 --> 00:43:32,800

educated guess to say that's where the

1017

00:43:37,829 --> 00:43:35,980

shadow of the of the earth is right

1018

00:43:40,650 --> 00:43:37,839

there thumbs down there to lift of ions

1019

00:43:41,880 --> 00:43:40,660

up there to the right you stop the skies

1020

00:43:44,220 --> 00:43:41,890

dark so you can't see where the earth

1021

00:43:46,740 --> 00:43:44,230

shadow is the earth casts a shadow into

1022

00:43:48,859 --> 00:43:46,750

space but we saw a parade of seven or

1023

00:43:51,150 --> 00:43:48,869

eight and now nothing where are they

1024

00:43:52,800 --> 00:43:51,160

we're looking around the sky we can't

1025

00:43:53,630 --> 00:43:52,810

see them you had several light I mean

1026

00:43:56,370 --> 00:43:53,640

don't ask for

1027

00:43:58,950 --> 00:43:56,380

normally we see one or two per seven or

1028

00:44:01,830 --> 00:43:58,960

eight and we are looking at all the

1029

00:44:03,480 --> 00:44:01,840

stars we can see tonight that a Ryan is

1030

00:44:06,030 --> 00:44:03,490

beautiful with Betelgeuse doing its

1031

00:44:07,560 --> 00:44:06,040

weird stuff at the moment across to the

1032

00:44:09,870 --> 00:44:07,570

other side we can see the Southern Cross

1033

00:44:11,610 --> 00:44:09,880

the Magellanic Clouds are up at the

1034

00:44:13,770 --> 00:44:11,620

moment so it's beautiful viewing here

1035

00:44:16,440 --> 00:44:13,780

the movie is a very very small moon and

1036

00:44:17,550 --> 00:44:16,450

just setting so the sky is quite dark if

1037

00:44:18,870 --> 00:44:17,560

it was a full moon you wouldn't see

1038

00:44:20,670 --> 00:44:18,880

anything yeah yeah no we're very lucky

1039

00:44:25,410 --> 00:44:20,680

and there's no clouds it's a completely

1040

00:44:27,330 --> 00:44:25,420

clear night yeah yeah you go to the belt

1041

00:44:29,820 --> 00:44:27,340

of Orion and drive it down and to the

1042

00:44:31,680 --> 00:44:29,830

right to the left and you see the Hyades

1043

00:44:34,080 --> 00:44:31,690

are held about on the v-shape do you see

1044

00:44:36,030 --> 00:44:34,090

the ploidies just below that only for a

1045

00:44:38,640 --> 00:44:36,040

couple of months a year but and and that

1046

00:44:40,350 --> 00:44:38,650

the Orion and the Pleiades have visible

1047

00:44:42,570 --> 00:44:40,360

the Northern Hemisphere but the Southern

1048

00:44:45,510 --> 00:44:42,580

Cross as we look towards the other side

1049

00:44:47,040 --> 00:44:45,520

we can see now that's not visible in the

1050

00:44:49,350 --> 00:44:47,050

northern hemisphere but we can't see

1051  
00:44:51,000 --> 00:44:49,360  
Polaris RZR oh we can't we can't see the

1052  
00:44:52,740 --> 00:44:51,010  
plow or Polaris but you have the saw the

1053  
00:44:54,990 --> 00:44:52,750  
Big Dipper the big difference is called

1054  
00:44:56,460 --> 00:44:55,000  
yeah same thing we have the Southern

1055  
00:44:58,410 --> 00:44:56,470  
Cross and other stars which actually the

1056  
00:45:03,780 --> 00:44:58,420  
Sun of the skies more wonderful than

1057  
00:45:05,520 --> 00:45:03,790  
than all the sky and of course better

1058  
00:45:08,250 --> 00:45:05,530  
objects are more stuff to look at him

1059  
00:45:09,630 --> 00:45:08,260  
yeah well that's great I mean we've come

1060  
00:45:11,430 --> 00:45:09,640  
down here for skeptic camp which is

1061  
00:45:16,170 --> 00:45:11,440  
happening tomorrow but this is an extra

1062  
00:45:17,970 --> 00:45:16,180  
special Oh was that I thought I saw

1063  
00:45:18,900 --> 00:45:17,980

something weird up in the sky awesome

1064

00:45:21,540 --> 00:45:18,910

awesome

1065

00:45:23,400 --> 00:45:21,550

a possum possum in a tree I thought it

1066

00:45:24,630 --> 00:45:23,410

was UF / it's probably just a possum in

1067

00:45:27,200 --> 00:45:24,640

a tree well you would say that your

1068

00:45:29,430 --> 00:45:27,210

typical Sagittarius I am active is a

1069

00:45:30,660 --> 00:45:29,440

showman Scorpio I don't know discovered

1070

00:45:31,950 --> 00:45:30,670

how about that are you gonna sing you

1071

00:45:34,560 --> 00:45:31,960

the tale oh I do I do

1072

00:45:39,120 --> 00:45:34,570

Oh Jimmy D I got two puzzles you know

1073

00:45:41,250 --> 00:45:39,130

here we go so this is just the icing on

1074

00:45:42,660 --> 00:45:41,260

the cake I think the beautiful starry

1075

00:45:43,140 --> 00:45:42,670

night it'll be a good conference

