

Freedom and Constraint



1
00:00:05,900 --> 00:00:03,320
I want to start with the three laws of

2
00:00:07,789 --> 00:00:05,910
thermodynamics I am aware that there are

3
00:00:11,080 --> 00:00:07,799
actually four laws but I'm going to

4
00:00:14,120 --> 00:00:11,090
ignore the zeroth law and talk about the

5
00:00:17,810 --> 00:00:14,130
traditional three and then I'm going to

6
00:00:22,599 --> 00:00:17,820
talk about how thermodynamics just

7
00:00:25,269 --> 00:00:22,609
doesn't work so let's get on with it

8
00:00:28,670 --> 00:00:25,279
the pessimistic laws of thermodynamics

9
00:00:30,439 --> 00:00:28,680
this was put to me by my original mentor

10
00:00:33,110 --> 00:00:30,449
in physical chemistry way back in the

11
00:00:36,500 --> 00:00:33,120
early 70s and here's the way he put it

12
00:00:40,520 --> 00:00:36,510
the first law you can never win

13
00:00:43,369 --> 00:00:40,530

you can only break even pessimistic the

14

00:00:48,080 --> 00:00:43,379

second law you can only break even it

15

00:00:51,860 --> 00:00:48,090

asks through zero hmm the third law you

16

00:00:54,080 --> 00:00:51,870

can never get to absolute zero so

17

00:00:56,389 --> 00:00:54,090

thermodynamics is inherently pessimistic

18

00:00:59,619 --> 00:00:56,399

it says give up before you start you're

19

00:01:02,119 --> 00:00:59,629

never going to get there the first

20

00:01:05,570 --> 00:01:02,129

statement is actually a statement of

21

00:01:07,190 --> 00:01:05,580

conservation of energy this began the

22

00:01:10,100 --> 00:01:07,200

history the history of thermodynamics

23

00:01:12,050 --> 00:01:10,110

began with steam engines heat engines

24

00:01:16,609 --> 00:01:12,060

trying to understand them trying to make

25

00:01:19,310 --> 00:01:16,619

them more efficient this first law was

26

00:01:21,109 --> 00:01:19,320

derived to describe heat engines but it

27

00:01:24,770 --> 00:01:21,119

was quickly generalized to other areas

28

00:01:28,460 --> 00:01:24,780

of science and over the intervening

29

00:01:30,980 --> 00:01:28,470

decades even centuries it has become a

30

00:01:33,740 --> 00:01:30,990

bedrock foundational concept that is

31

00:01:37,730 --> 00:01:33,750

never challenged however when you get

32

00:01:40,390 --> 00:01:37,740

into physics more deeply you find that

33

00:01:43,609 --> 00:01:40,400

there's some intrigue behind this

34

00:01:45,469 --> 00:01:43,619

conservation principle first of all

35

00:01:47,960 --> 00:01:45,479

let's state the conservation principle

36

00:01:50,030 --> 00:01:47,970

explicitly energy may be transformed

37

00:01:52,700 --> 00:01:50,040

from one kind to another but it cannot

38

00:01:55,880 --> 00:01:52,710

be created or destroyed the total energy

39

00:01:59,690 --> 00:01:55,890

is constant co e conservation of energy

40

00:02:02,060 --> 00:01:59,700

is my abbreviation for it this principle

41

00:02:05,480 --> 00:02:02,070

is most clearly true in what are called

42

00:02:07,880 --> 00:02:05,490

adiabatic systems that is artificially

43

00:02:10,729 --> 00:02:07,890

constructive systems in which no energy

44

00:02:13,960 --> 00:02:10,739

or matter can enter or leave the system

45

00:02:15,970 --> 00:02:13,970

in these systems we can experiment

46

00:02:18,100 --> 00:02:15,980

determined that indeed energy is

47

00:02:21,510 --> 00:02:18,110

conserved and these systems are called

48

00:02:26,610 --> 00:02:21,520

closed systems I want to emphasize

49

00:02:28,840 --> 00:02:26,620

closed systems generally when we

50

00:02:31,870 --> 00:02:28,850

generalized this principle to the entire

51
00:02:35,260 --> 00:02:31,880
realm of science and the universe we

52
00:02:37,270 --> 00:02:35,270
consider it to be true where the entire

53
00:02:39,940 --> 00:02:37,280
universe is considered to be a closed

54
00:02:46,180 --> 00:02:39,950
system that's another key concept that

55
00:02:48,190 --> 00:02:46,190
I'm going to try to destroy the great

56
00:02:49,810 --> 00:02:48,200
physicist Richard Fineman one of the

57
00:02:52,000 --> 00:02:49,820
greatest physicists of the 20th century

58
00:02:54,310 --> 00:02:52,010
had this to say about the law of

59
00:02:57,699 --> 00:02:54,320
conservation of energy there is a fact

60
00:03:00,210 --> 00:02:57,709
if you wish a law governing all natural

61
00:03:03,340 --> 00:03:00,220
phenomena that are known to date

62
00:03:05,590 --> 00:03:03,350
note that qualification that are known

63
00:03:07,660 --> 00:03:05,600

to date the law is called the

64

00:03:09,970 --> 00:03:07,670

conservation of energy that is a most

65

00:03:12,190 --> 00:03:09,980

abstract idea because it is a

66

00:03:14,470 --> 00:03:12,200

mathematical principle it says that

67

00:03:17,170 --> 00:03:14,480

there is a numerical quality quantity

68

00:03:18,850 --> 00:03:17,180

sorry which does not change when

69

00:03:20,979 --> 00:03:18,860

something happens it is not a

70

00:03:24,310 --> 00:03:20,989

description of a mechanism or anything

71

00:03:26,590 --> 00:03:24,320

concrete it is just a strange fact that

72

00:03:28,449 --> 00:03:26,600

we can calculate some number and when we

73

00:03:31,449 --> 00:03:28,459

finish watching nature go through her

74

00:03:35,250 --> 00:03:31,459

tricks and calculate the number again it

75

00:03:37,420 --> 00:03:35,260

is the same so final and considers

76

00:03:40,560 --> 00:03:37,430

conservation of energy to be very

77

00:03:43,930 --> 00:03:40,570

abstract and very strange

78

00:03:46,720 --> 00:03:43,940

well since I'm now entering philosophy

79

00:03:49,300 --> 00:03:46,730

as my third field I need to quote a

80

00:03:54,660 --> 00:03:49,310

couple of philosophers philosophers of

81

00:03:57,460 --> 00:03:54,670

science start with dr. Karl Popper he is

82

00:04:00,880 --> 00:03:57,470

the biggest proponent of a concept

83

00:04:03,310 --> 00:04:00,890

called falsifiability he insisted that a

84

00:04:06,370 --> 00:04:03,320

theory is not scientific unless it is

85

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

falsifiable one of the most horrid words

86

00:04:12,430 --> 00:04:09,769

I've ever run across in my entire life

87

00:04:16,840 --> 00:04:12,440

what it means is not what it says but

88

00:04:20,500 --> 00:04:16,850

rather a theory is falsifiable if it is

89

00:04:22,029 --> 00:04:20,510

at least conceivable that an experiment

90

00:04:24,279 --> 00:04:22,039

can be designed that would have the

91

00:04:27,490 --> 00:04:24,289

potential to demonstrate that the theory

92

00:04:27,750 --> 00:04:27,500

is false not that the theory is actually

93

00:04:34,560 --> 00:04:27,760

for

94

00:04:38,430 --> 00:04:34,570

the word would suggest well another

95

00:04:41,580 --> 00:04:38,440

philosopher of science dr. James ladyman

96

00:04:44,300 --> 00:04:41,590

which is one of the great names in all

97

00:04:47,640 --> 00:04:44,310

of science and philosophy and history

98

00:04:49,950 --> 00:04:47,650

dr. lady Mann says quote some

99

00:04:52,110 --> 00:04:49,960

unfalsifiable principles may nonetheless

100

00:04:54,720 --> 00:04:52,120

be rightly considered part of scientific

101
00:04:56,730 --> 00:04:54,730
knowledge it is inconceivable to most

102
00:04:59,370 --> 00:04:56,740
scientists that an experiment could

103
00:05:02,280 --> 00:04:59,380
falsify it meaning conservation of

104
00:05:05,520 --> 00:05:02,290
energy and apparent violation would

105
00:05:08,310 --> 00:05:05,530
reveal instead that something is wrong

106
00:05:09,720 --> 00:05:08,320
with the rest of science in other words

107
00:05:11,700 --> 00:05:09,730
scientists won't question the

108
00:05:15,810 --> 00:05:11,710
conservation principle they'll go look

109
00:05:18,120 --> 00:05:15,820
for something other than it to fix so

110
00:05:19,980 --> 00:05:18,130
that they can save the principle well

111
00:05:23,070 --> 00:05:19,990
I'm here today to destroy the principle

112
00:05:24,300 --> 00:05:23,080
so I guess I'm going to be claiming that

113
00:05:25,050 --> 00:05:24,310

there's something wrong with the rest of

114

00:05:31,850 --> 00:05:25,060

science

115

00:05:37,230 --> 00:05:31,860

according to dr. ladyman so I want to

116

00:05:40,260 --> 00:05:37,240

use a dirty term string theory I already

117

00:05:44,310 --> 00:05:40,270

know that Henry Bower and your goblins

118

00:05:46,770 --> 00:05:44,320

are not fans of string theory it is in

119

00:05:48,390 --> 00:05:46,780

fact very controversial it's not really

120

00:05:51,420 --> 00:05:48,400

recent it has a history that goes back

121

00:05:53,670 --> 00:05:51,430

at least to the 70s but it has only

122

00:05:56,420 --> 00:05:53,680

become popular famous

123

00:05:59,910 --> 00:05:56,430

really in the last couple of decades

124

00:06:02,100 --> 00:05:59,920

string theory proposes that the most

125

00:06:05,370 --> 00:06:02,110

fundamental entity in the universe is

126
00:06:09,750 --> 00:06:05,380
energy and that it's manifested in two

127
00:06:12,990 --> 00:06:09,760
forms the closed loop string and the

128
00:06:14,760 --> 00:06:13,000
open-ended string notice the closed loop

129
00:06:16,620 --> 00:06:14,770
string is self-contained

130
00:06:19,230 --> 00:06:16,630
but the open-ended string has a couple

131
00:06:23,520 --> 00:06:19,240
of ends a couple of loose ends that need

132
00:06:28,110 --> 00:06:23,530
to be tied up so string theory proposes

133
00:06:31,460 --> 00:06:28,120
that open strings are tied up by being

134
00:06:38,760 --> 00:06:31,470
attached to what's called a D brane and

135
00:06:40,390 --> 00:06:38,770
this is a we use my red pointer can you

136
00:06:43,870 --> 00:06:40,400
see the red

137
00:06:46,930 --> 00:06:43,880
the red on red here is the d-brane

138
00:06:50,170 --> 00:06:46,940

that's reduced to two dimensions from

139

00:06:53,980 --> 00:06:50,180

four dimensions three spatial and one

140

00:06:59,189 --> 00:06:53,990

temporal dimension and an open string

141

00:07:01,450 --> 00:06:59,199

must be affixed by at least one end to a

142

00:07:03,460 --> 00:07:01,460

space-time in this case a

143

00:07:05,710 --> 00:07:03,470

four-dimensional space-time whereas a

144

00:07:07,689 --> 00:07:05,720

closed string needs no such attachment

145

00:07:12,610 --> 00:07:07,699

in fact it cannot form any such

146

00:07:16,390 --> 00:07:12,620

attachment and so we have a situation

147

00:07:18,610 --> 00:07:16,400

where one is constrained that is open

148

00:07:21,879 --> 00:07:18,620

strings are constrained by being fixed

149

00:07:24,640 --> 00:07:21,889

in a space-time whereas closed strings

150

00:07:26,290 --> 00:07:24,650

are free they're free agents they're

151
00:07:28,950 --> 00:07:26,300
free floating they can go anywhere they

152
00:07:31,270 --> 00:07:28,960
can be in a four-dimensional space-time

153
00:07:33,760 --> 00:07:31,280
but they can also leave it they're not

154
00:07:36,490 --> 00:07:33,770
attached to it that means first of all

155
00:07:39,460 --> 00:07:36,500
that closed loop strings do have the

156
00:07:42,790 --> 00:07:39,470
exclusionary property of matter what

157
00:07:45,219 --> 00:07:42,800
philosophers called extension closed

158
00:07:47,680 --> 00:07:45,229
loop strings do not have extension they

159
00:07:50,490 --> 00:07:47,690
do not occupy space in an exclusionary

160
00:07:52,750 --> 00:07:50,500
manner although they can exist within

161
00:07:55,240 --> 00:07:52,760
four-dimensional space they are not

162
00:07:59,200 --> 00:07:55,250
excluding other objects from that same

163
00:08:00,659 --> 00:07:59,210

space so to speak so string theory says

164

00:08:03,149 --> 00:08:00,669

that these are the two basic components

165

00:08:06,520 --> 00:08:03,159

from which everything else is

166

00:08:08,500 --> 00:08:06,530

constructed now again I will say string

167

00:08:10,659 --> 00:08:08,510

theory is controversial it has not been

168

00:08:12,730 --> 00:08:10,669

proven some scientists believe it's

169

00:08:14,920 --> 00:08:12,740

unprovable and therefore not scientific

170

00:08:17,920 --> 00:08:14,930

that is the Pape area in view that's

171

00:08:20,909 --> 00:08:17,930

unfalsifiable so it's not science I'm

172

00:08:22,180 --> 00:08:20,919

going to argue that in fact it is

173

00:08:25,060 --> 00:08:22,190

falsifiable

174

00:08:28,240 --> 00:08:25,070

and it has not been falsified due to

175

00:08:34,300 --> 00:08:28,250

billions of experiments pretty

176
00:08:36,940 --> 00:08:34,310
outrageous closed strings should be able

177
00:08:39,339 --> 00:08:36,950
to form entities by interacting with

178
00:08:42,100 --> 00:08:39,349
each other just as open strings do

179
00:08:42,990 --> 00:08:42,110
there's no opry reason why this is

180
00:08:46,449 --> 00:08:43,000
impossible

181
00:08:49,269 --> 00:08:46,459
so is it possible to conceive of a

182
00:08:53,250 --> 00:08:49,279
closed string body a closed string

183
00:08:55,200 --> 00:08:53,260
entity I'm going to suggest to you the

184
00:08:59,730 --> 00:08:55,210
you're looking at right now is a picture

185
00:09:02,400 --> 00:08:59,740
of a closed string entity or body and no

186
00:09:04,440 --> 00:09:02,410
not the entire closet that you see there

187
00:09:08,790 --> 00:09:04,450
I'm gonna have to point out the entity

188
00:09:12,960 --> 00:09:08,800

to you it's a little hard to see but

189

00:09:15,120 --> 00:09:12,970

it's right there do you see it this is

190

00:09:21,690 --> 00:09:15,130

what is called in parapsychological

191

00:09:23,400 --> 00:09:21,700

circles and orb and at past SSE

192

00:09:25,200 --> 00:09:23,410

conferences when I've mentioned orbs to

193

00:09:26,790 --> 00:09:25,210

people they've pulled out their laptops

194

00:09:29,610 --> 00:09:26,800

and shown me their collections of

195

00:09:31,670 --> 00:09:29,620

pictures of orbs and I'm like well

196

00:09:34,140 --> 00:09:31,680

you're way ahead of me on the orb front

197

00:09:36,420 --> 00:09:34,150

this is the only picture I have of an

198

00:09:38,970 --> 00:09:36,430

orb and this was given to me by a friend

199

00:09:42,090 --> 00:09:38,980

who was a ghost hunter at a part-time

200

00:09:44,070 --> 00:09:42,100

amateur ghost hunter she was

201
00:09:48,450 --> 00:09:44,080
investigating her mother's basement and

202
00:09:50,790 --> 00:09:48,460
she announced to no one in particular if

203
00:09:53,880 --> 00:09:50,800
there is anyone here who would like to

204
00:09:56,130 --> 00:09:53,890
reveal themselves please do so now and

205
00:09:59,520 --> 00:09:56,140
she took three consecutive digital

206
00:10:03,450 --> 00:09:59,530
frames the first and third revealed only

207
00:10:08,280 --> 00:10:03,460
the closet the middle one showed this

208
00:10:11,490 --> 00:10:08,290
white entity in the frame so it showed

209
00:10:13,040 --> 00:10:11,500
up at her request and it disappeared it

210
00:10:15,360 --> 00:10:13,050
didn't come from anywhere

211
00:10:17,520 --> 00:10:15,370
apparently and it didn't go anywhere

212
00:10:21,180 --> 00:10:17,530
apparently it just popped into this

213
00:10:23,880 --> 00:10:21,190

reality and popped out this I'm going to

214

00:10:28,590 --> 00:10:23,890

suggest to you is a closed loop string

215

00:10:31,110 --> 00:10:28,600

entity otherwise known as a ghost also

216

00:10:36,780 --> 00:10:31,120

otherwise known as a disembodied human

217

00:10:39,240 --> 00:10:36,790

spirit so I'm suggesting that we as

218

00:10:42,480 --> 00:10:39,250

spiritual entities are composed of

219

00:10:45,330 --> 00:10:42,490

closed strings and we can pop in and out

220

00:10:49,230 --> 00:10:45,340

of this universe when we're not tied to

221

00:10:51,570 --> 00:10:49,240

a body string theory is consistent with

222

00:10:53,610 --> 00:10:51,580

this picture if you don't like string

223

00:10:56,790 --> 00:10:53,620

theory you can at least think of it as a

224

00:11:00,600 --> 00:10:56,800

way to conceive of these things as

225

00:11:04,569 --> 00:11:00,610

having some kind of physical basis if

226

00:11:10,259 --> 00:11:04,579

you reject that you reject my talk

227

00:11:12,819 --> 00:11:10,269

which is okay but why would I think this

228

00:11:14,739 --> 00:11:12,829

well it turns out of that empirical

229

00:11:17,289 --> 00:11:14,749

evidence from the near-death experience

230

00:11:21,220 --> 00:11:17,299

and this is where another connection

231

00:11:24,419 --> 00:11:21,230

comes in Indi ears are people who have

232

00:11:27,699 --> 00:11:24,429

experienced near-death experiences so

233

00:11:30,669 --> 00:11:27,709

from Raymond Moody's initial book in

234

00:11:33,009 --> 00:11:30,679

1975 which is rich with descriptions is

235

00:11:36,669 --> 00:11:33,019

short on science but it's rich in

236

00:11:39,429 --> 00:11:36,679

descriptions he quotes people who were

237

00:11:42,369 --> 00:11:39,439

out of their bodies and he asked them

238

00:11:43,720 --> 00:11:42,379

what they were like what their cells

239

00:11:46,539 --> 00:11:43,730

were like when they were out of their

240

00:11:49,840 --> 00:11:46,549

bodies and here are three quotes first

241

00:11:53,530 --> 00:11:49,850

the person described being composed of

242

00:11:57,009 --> 00:11:53,540

waves and being charged a second person

243

00:11:59,619 --> 00:11:57,019

described being an energy pattern and a

244

00:12:02,710 --> 00:11:59,629

third person described to being a little

245

00:12:04,949 --> 00:12:02,720

ball of energy and if you'll think back

246

00:12:07,179 --> 00:12:04,959

to the closet picture I had just before

247

00:12:10,720 --> 00:12:07,189

doesn't that seem like a little ball of

248

00:12:13,900 --> 00:12:10,730

energy just on the surface of it this

249

00:12:17,859 --> 00:12:13,910

gives me the idea that in fact the human

250

00:12:20,650 --> 00:12:17,869

spirit is has an energetic nature or

251

00:12:22,299 --> 00:12:20,660

energetic basis and it's composed of

252

00:12:25,479 --> 00:12:22,309

something that's not tied to this

253

00:12:27,609 --> 00:12:25,489

universe other than by interactions with

254

00:12:37,400 --> 00:12:27,619

the body so when you're out of your body

255

00:12:42,710 --> 00:12:40,730

you might go through a wormhole this is

256

00:12:44,509 --> 00:12:42,720

the relativistic wormhole predicted by

257

00:12:47,180 --> 00:12:44,519

general relativity it's one of the

258

00:12:48,530 --> 00:12:47,190

solutions to Einstein's equations one of

259

00:12:54,889 --> 00:12:48,540

the many solutions along with black

260

00:13:00,019 --> 00:12:54,899

holes and it suggests that we can find

261

00:13:02,689 --> 00:13:00,029

my red dot I'm gonna do it without it

262

00:13:05,509 --> 00:13:02,699

suggests that we can traverse from one

263

00:13:08,179 --> 00:13:05,519

area of space to another but relatively

264

00:13:10,579 --> 00:13:08,189

relativity explicitly says that the

265

00:13:13,100 --> 00:13:10,589

topology of the two surfaces connected

266

00:13:15,559 --> 00:13:13,110

are not determined by the presence of

267

00:13:16,999 --> 00:13:15,569

the wormhole so those two surfaces can

268

00:13:19,129 --> 00:13:17,009

wrap around and connect with each other

269

00:13:21,170 --> 00:13:19,139

in which case the wormhole is a shortcut

270

00:13:24,800 --> 00:13:21,180

from one place to another in this

271

00:13:26,869 --> 00:13:24,810

universe or the two surfaces can be

272

00:13:29,360 --> 00:13:26,879

completely disconnected which means the

273

00:13:31,999 --> 00:13:29,370

wormhole represents a pathway from one

274

00:13:34,369 --> 00:13:32,009

universe to another parallel universe

275

00:13:36,769 --> 00:13:34,379

I'm suggesting that in the near-death

276

00:13:39,769 --> 00:13:36,779

experience this is what happens the

277

00:13:43,040 --> 00:13:39,779

second case that the disembodied closed

278

00:13:47,689 --> 00:13:43,050

string entity travels through a wormhole

279

00:13:50,030 --> 00:13:47,699

the NDE tunnel as it's called to another

280

00:13:53,120 --> 00:13:50,040

parallel space-time which has been

281

00:13:58,069 --> 00:13:53,130

described in great detail by many in the

282

00:14:01,910 --> 00:13:58,079

years in fact the tunnel itself has been

283

00:14:03,650 --> 00:14:01,920

described here's one description I do

284

00:14:05,870 --> 00:14:03,660

remember thinking to myself that I was

285

00:14:06,590 --> 00:14:05,880

dying and I felt I was floating through

286

00:14:09,050 --> 00:14:06,600

a tunnel

287

00:14:10,939 --> 00:14:09,060

when I say tunnel the only thing I can

288

00:14:13,490 --> 00:14:10,949

think of is you know those sewer pipes

289

00:14:16,370 --> 00:14:13,500

those big pipes they put in it was round

290

00:14:18,559 --> 00:14:16,380

like that but it was enormous I really

291

00:14:22,299 --> 00:14:18,569

couldn't see the edges of it I got the

292

00:14:24,290 --> 00:14:22,309

feeling that it was around another case

293

00:14:26,900 --> 00:14:24,300

the first thing I remember was a

294

00:14:28,970 --> 00:14:26,910

tremendous rushing sound a tremendous

295

00:14:30,889 --> 00:14:28,980

it's very hard to find the right words

296

00:14:33,290 --> 00:14:30,899

to describe the closest thing I could

297

00:14:35,389 --> 00:14:33,300

possibly associated with it with is

298

00:14:37,850 --> 00:14:35,399

possibly the sound of a tornado a

299

00:14:40,879 --> 00:14:37,860

tremendous gushing wind but almost

300

00:14:42,740 --> 00:14:40,889

pulling me and here's the key part and I

301
00:14:46,069 --> 00:14:42,750
was being pulled into a narrow point

302
00:14:49,890 --> 00:14:46,079
from a wide area think again of the

303
00:14:53,160 --> 00:14:49,900
wormhole diagram the interviewer says so

304
00:14:56,010 --> 00:14:53,170
going into a funnel and the in in the

305
00:14:56,850 --> 00:14:56,020
ear says yes yes and it was nothing

306
00:14:58,260 --> 00:14:56,860
painful

307
00:15:00,090 --> 00:14:58,270
there was nothing frightening about it

308
00:15:03,570 --> 00:15:00,100
it was just something I felt I gave

309
00:15:08,850 --> 00:15:03,580
myself into and completely and it felt

310
00:15:10,500 --> 00:15:08,860
good a third case I felt as though I was

311
00:15:12,900 --> 00:15:10,510
well that's the hard part to explain

312
00:15:16,230 --> 00:15:12,910
like you're floating like you're there

313
00:15:19,200 --> 00:15:16,240

and believe it or not the color is there

314

00:15:21,060 --> 00:15:19,210

is no color it's like a darkness the

315

00:15:23,370 --> 00:15:21,070

interviewer asked did the darkness have

316

00:15:25,770 --> 00:15:23,380

a shape of any kind it was empty

317

00:15:28,050 --> 00:15:25,780

which is not answering the question yeah

318

00:15:30,570 --> 00:15:28,060

that's it's space just nothing nothing

319

00:15:33,780 --> 00:15:30,580

but something it's like trying to

320

00:15:36,870 --> 00:15:33,790

describe the end of the universe there's

321

00:15:40,200 --> 00:15:36,880

the key phrase so think back to the

322

00:15:43,290 --> 00:15:40,210

diagram of the wormhole would entering

323

00:15:46,910 --> 00:15:43,300

the wormhole be like leaving the

324

00:15:52,680 --> 00:15:46,920

universe that's exactly what it would be

325

00:15:55,050 --> 00:15:52,690

so these in the ear descriptions are

326

00:15:57,690 --> 00:15:55,060

commensurate with a closed string

327

00:16:01,430 --> 00:15:57,700

energetic body that travels through a

328

00:16:05,820 --> 00:16:05,400

outrageous stuff I know but here's the

329

00:16:09,210 --> 00:16:05,830

point

330

00:16:13,590 --> 00:16:09,220

if closed loop strings are composed of

331

00:16:16,890 --> 00:16:13,600

energy then they are constantly leading

332

00:16:20,010 --> 00:16:16,900

this universe through wormholes others

333

00:16:22,560 --> 00:16:20,020

I'm proposing are constantly entering

334

00:16:25,230 --> 00:16:22,570

this universe through wormholes that's

335

00:16:29,130 --> 00:16:25,240

how we come and go from this plane of

336

00:16:31,440 --> 00:16:29,140

existence furthermore string theory in

337

00:16:33,630 --> 00:16:31,450

general M theory the most advanced form

338

00:16:36,720 --> 00:16:33,640

of it says that there are 11 total

339

00:16:40,350 --> 00:16:36,730

dimensions five of which are

340

00:16:43,230 --> 00:16:40,360

spatiotemporal for spatial dimensions

341

00:16:45,000 --> 00:16:43,240

and one temporal dimension and the

342

00:16:49,500 --> 00:16:45,010

remaining dimensions are curled up and

343

00:16:51,480 --> 00:16:49,510

inaccessible to us in that case screen

344

00:16:53,640 --> 00:16:51,490

theory and relativity are making the

345

00:16:57,330 --> 00:16:53,650

same prediction that there is a fifth

346

00:17:02,730 --> 00:16:57,340

spatial extended spatial dimension that

347

00:17:05,870 --> 00:17:02,740

means that not only are we losing energy

348

00:17:09,840 --> 00:17:05,880

and gaining energy by exchange through

349

00:17:12,210 --> 00:17:09,850

wormholes but other energy in the form

350

00:17:14,059 --> 00:17:12,220

of gravitons is leaving the universe

351
00:17:17,210 --> 00:17:14,069
through the other curled up dimensions

352
00:17:20,970 --> 00:17:17,220
in other words energy is not conserved

353
00:17:23,970 --> 00:17:20,980
it's constantly leaking out of and into

354
00:17:26,850 --> 00:17:23,980
this universe and so let me go to my

355
00:17:28,830 --> 00:17:26,860
summary points energy leaks from this

356
00:17:31,169 --> 00:17:28,840
universe in the form of gravitons not

357
00:17:33,270 --> 00:17:31,179
bound by our space-time energy is

358
00:17:35,340 --> 00:17:33,280
exchanged between this and a parallel

359
00:17:36,990 --> 00:17:35,350
space-time in the form of closed string

360
00:17:39,930 --> 00:17:37,000
bodies that are the seat of

361
00:17:42,150 --> 00:17:39,940
consciousness that's from the NDE our

362
00:17:44,700 --> 00:17:42,160
space-time therefore does not constitute

363
00:17:47,340 --> 00:17:44,710

a closed system in the thermodynamic

364

00:17:49,430 --> 00:17:47,350

sense we can no longer say the universe

365

00:17:51,890 --> 00:17:49,440

is a closed system and save the

366

00:17:56,970 --> 00:17:51,900

conservation of energy through that

367

00:17:59,340 --> 00:17:56,980

mechanism further conservation of energy

368

00:18:02,850 --> 00:17:59,350

therefore cannot apply to the US as a

369

00:18:05,340 --> 00:18:02,860

whole nor to consciousness at all and

370

00:18:07,350 --> 00:18:05,350

please note that conservation of energy

371

00:18:11,669 --> 00:18:07,360

historically has been one of the

372

00:18:15,030 --> 00:18:11,679

objections to substance dualism as an

373

00:18:17,430 --> 00:18:15,040

explanation of mind body nature or

374

00:18:18,049 --> 00:18:17,440

interaction so this destroys that

375

00:18:20,490 --> 00:18:18,059

objection

376

00:18:22,910 --> 00:18:20,500

similarly conservation of energy cannot

377

00:18:26,250 --> 00:18:22,920

be applied to large mass systems

378

00:18:30,000 --> 00:18:26,260

although this has not been tested and

379

00:18:32,040 --> 00:18:30,010

remember fineman's statement the natural

380

00:18:34,710 --> 00:18:32,050

phenomena that we are aware of to date

381

00:18:35,880 --> 00:18:34,720

well now we know more than we did when

382

00:18:38,430 --> 00:18:35,890

Feynman was alive

383

00:18:41,220 --> 00:18:38,440

hence conservation of energy should be

384

00:18:43,650 --> 00:18:41,230

seen as a useful approximation but only

385

00:18:45,630 --> 00:18:43,660

for small mass systems and inanimate

386

00:18:47,820 --> 00:18:45,640

systems that is systems without

387

00:18:50,400 --> 00:18:47,830

consciousness because I believe the

388

00:18:53,190 --> 00:18:50,410

consciousness has its origins in closed

389

00:18:54,830 --> 00:18:53,200

strings that are not necessarily

390

00:18:58,260 --> 00:18:54,840

conserved in the universe

391

00:19:02,659 --> 00:18:58,270

so that's my talk thank you very much

392

00:19:06,180 --> 00:19:02,669

[Applause]

393

00:19:09,840 --> 00:19:06,190

I've spent a lot of time analyzing UFO

394

00:19:12,830 --> 00:19:09,850

data including pictures of orbs just one

395

00:19:15,480 --> 00:19:12,840

thing sprang to mind whenever you see a

396

00:19:18,149 --> 00:19:15,490

fuzzy faint orb

397

00:19:20,909 --> 00:19:18,159

look diametrically opposed in the

398

00:19:23,490 --> 00:19:20,919

photograph for a bright light sometimes

399

00:19:26,100 --> 00:19:23,500

there's a lens reflection that goes over

400

00:19:28,980 --> 00:19:26,110

to the opposite side and sure enough in

401
00:19:30,659 --> 00:19:28,990
this photograph of the closet down in

402
00:19:33,810 --> 00:19:30,669
the lower left was the brightest thing

403
00:19:35,629 --> 00:19:33,820
in the Laura left was a bright light the

404
00:19:37,769 --> 00:19:35,639
brightest thing in the frame and

405
00:19:45,180 --> 00:19:37,779
diametrically opposed was a dim light

406
00:19:49,080 --> 00:19:45,190
maybe just pointed on my question

407
00:19:51,870 --> 00:19:49,090
involves detection it's so if mass is

408
00:19:53,909 --> 00:19:51,880
not consider G is not conserved then

409
00:19:56,460 --> 00:19:53,919
perhaps mass also is not conserved and

410
00:19:58,950 --> 00:19:56,470
then there's a mass associated with any

411
00:20:02,220 --> 00:19:58,960
energy divided by C squared and all that

412
00:20:03,450 --> 00:20:02,230
so just as we can build detectors and

413
00:20:07,590 --> 00:20:03,460

people have built detectors to detect

414

00:20:09,659 --> 00:20:07,600

the standard spin to gravity waves it

415

00:20:13,169 --> 00:20:09,669

ought to be possible I suppose to build

416

00:20:14,639 --> 00:20:13,179

a detector that could detect these what

417

00:20:18,090 --> 00:20:14,649

would you call it scalar gravity wave

418

00:20:27,510 --> 00:20:18,100

that would occur when a mass suddenly

419

00:20:39,620 --> 00:20:31,050

I can't comment on that productively at

420

00:20:42,390 --> 00:20:39,630

all sorry yes I'd like to comment that

421

00:20:44,160 --> 00:20:42,400

you're actually not refuting energy

422

00:20:46,320 --> 00:20:44,170

conservation at all you're simply

423

00:20:48,530 --> 00:20:46,330

extending the size of the system that we

424

00:20:51,900 --> 00:20:48,540

have to refer to as the whole universe I

425

00:20:53,940 --> 00:20:51,910

do have an issue with the whole going

426
00:20:56,070 --> 00:20:53,950
through a wormhole notion however

427
00:20:58,380 --> 00:20:56,080
because there's there's nothing magical

428
00:21:02,220 --> 00:20:58,390
about a relativistic wormhole that would

429
00:21:07,650 --> 00:21:02,230
make it only accessible to closed

430
00:21:10,470 --> 00:21:07,660
strings if there were one or many large

431
00:21:13,940 --> 00:21:10,480
wormholes in the vicinity of Earth we we

432
00:21:15,990 --> 00:21:13,950
would definitely have noticed by now I

433
00:21:19,110 --> 00:21:16,000
happen to disagree with you very

434
00:21:22,770 --> 00:21:19,120
strongly on that point I'd like to add

435
00:21:25,680 --> 00:21:22,780
to what the first questionnaire said

436
00:21:28,440 --> 00:21:25,690
which is describing a lens flare but

437
00:21:31,920 --> 00:21:28,450
there is another mechanism where you can

438
00:21:38,000 --> 00:21:31,930

produce another mechanism where you can

439

00:21:41,160 --> 00:21:38,010

produce these orbs okay there's another

440

00:21:45,090 --> 00:21:41,170

mechanism okay there's another mechanism

441

00:21:47,490 --> 00:21:45,100

where you can produce orbs I in my

442

00:21:50,370 --> 00:21:47,500

research I track a phenomena called

443

00:21:52,740 --> 00:21:50,380

earth lights which often precede large

444

00:21:55,350 --> 00:21:52,750

earthquakes and so I've done a lot of

445

00:21:59,250 --> 00:21:55,360

photo analysis and debunking my own

446

00:22:03,090 --> 00:21:59,260

material a lot of it but what can happen

447

00:22:05,760 --> 00:22:03,100

is that dust that's about eighteen

448

00:22:09,860 --> 00:22:05,770

inches in front of the cameras lens can

449

00:22:13,680 --> 00:22:09,870

reflect the flash from the camera and

450

00:22:18,780 --> 00:22:13,690

dust is everywhere and oftentimes we see

451
00:22:22,460 --> 00:22:18,790
a person with a beard that is surrounded

452
00:22:26,070 --> 00:22:22,470
by orbs and or wearing fuzzy clothes and

453
00:22:28,320 --> 00:22:26,080
so what happens is I think that you have

454
00:22:32,580 --> 00:22:28,330
to be very careful in the interpretation

455
00:22:35,340 --> 00:22:32,590
of the of an orb and really do a very

456
00:22:38,040 --> 00:22:35,350
concentrated analysis and rule out

457
00:22:39,810 --> 00:22:38,050
because I've taken a dust cloth and

458
00:22:41,240 --> 00:22:39,820
shaking it in front of a camera I've

459
00:22:43,790 --> 00:22:41,250
taken

460
00:22:46,370 --> 00:22:43,800
you know spray and you can produce these

461
00:22:47,960 --> 00:22:46,380
orbs so I suggest that maybe you do that

462
00:22:53,900 --> 00:22:47,970
and compare that to some of your

463
00:22:56,780 --> 00:22:53,910

photographs thank you very much for your

464

00:23:00,500 --> 00:22:56,790

talk it really meant a lot to me I just

465

00:23:02,420 --> 00:23:00,510

like to say about orbs that from being

466

00:23:05,180 --> 00:23:02,430

very skeptical

467

00:23:09,770 --> 00:23:05,190

I was completely turned around on going

468

00:23:13,700 --> 00:23:09,780

to the festival of sacred music in Fez

469

00:23:16,850 --> 00:23:13,710

Morocco and on looking at my photographs

470

00:23:21,470 --> 00:23:16,860

when I got home flash photographs in a

471

00:23:24,320 --> 00:23:21,480

huge auditorium open-air the it was

472

00:23:27,470 --> 00:23:24,330

loaded with orbs and many of them were

473

00:23:31,840 --> 00:23:27,480

colored now since then I've done a lot

474

00:23:36,980 --> 00:23:31,850

of control experiments and there was

475

00:23:37,700 --> 00:23:36,990

spray water spray and fungal spores and

476
00:23:41,570 --> 00:23:37,710
things like that

477
00:23:44,210 --> 00:23:41,580
they're never colored and the other

478
00:23:48,590 --> 00:23:44,220
example I quote I went around local

479
00:23:50,510 --> 00:23:48,600
church yards at night in the oldest one

480
00:23:52,490 --> 00:23:50,520
the old Saxon churchyard

481
00:24:00,400 --> 00:23:52,500
the orbs were there and they were

482
00:24:03,710 --> 00:24:00,410
colored I had a question why you used

483
00:24:06,560 --> 00:24:03,720
gravitons to be the source of this

484
00:24:09,100 --> 00:24:06,570
energy leakage it's it's sort of an

485
00:24:15,890 --> 00:24:09,110
imaginary particle no-one's even found

486
00:24:18,440 --> 00:24:15,900
why you do you choose that well string

487
00:24:22,460 --> 00:24:18,450
theorists who chose it and yes they have

488
00:24:24,200 --> 00:24:22,470

not been found yet but about three years

489

00:24:27,860 --> 00:24:24,210

ago the Higgs boson had never been found

490

00:24:31,760 --> 00:24:27,870

and now it has been so I guess I'm

491

00:24:33,080 --> 00:24:31,770

relying on future physics to come to a

492

00:24:35,300 --> 00:24:33,090

conclusion that these things are real