



Society for Scientific Exploration

1
00:00:03,300 --> 00:00:09,070

[Music]

2
00:00:13,690 --> 00:00:11,410

it's always exciting to get the talk in

3
00:00:15,220 --> 00:00:13,700

front of folks like yourselves and I'm

4
00:00:17,080 --> 00:00:15,230

gonna talk about physics synchronicity

5
00:00:18,670 --> 00:00:17,090

and experimenter expectation my

6
00:00:22,570 --> 00:00:18,680

particular interest is the physics of

7
00:00:24,490 --> 00:00:22,580

synchronicity but I wanted to see if

8
00:00:25,900 --> 00:00:24,500

that could relate to this idea the

9
00:00:29,470 --> 00:00:25,910

experimenter effect or experiment or

10
00:00:30,639 --> 00:00:29,480

expectation so the quote here is the

11
00:00:31,929 --> 00:00:30,649

experimenter effect is the most

12
00:00:34,000 --> 00:00:31,939

important challenge facing modern

13
00:00:36,130 --> 00:00:34,010

parapsychology it may be that we will

14

00:00:37,389 --> 00:00:36,140

not be able to make too much progress in

15

00:00:38,710 --> 00:00:37,399

other areas of the field until the

16

00:00:41,709 --> 00:00:38,720

puzzle of the experimenter effect is

17

00:00:43,990 --> 00:00:41,719

solved that's an important it's an

18

00:00:45,220 --> 00:00:44,000

important thing to talk about and we

19

00:00:46,979 --> 00:00:45,230

will explain I'll explain what that is

20

00:00:49,569 --> 00:00:46,989

as we go if you're not familiar with it

21

00:00:50,829 --> 00:00:49,579

first I want to define the way I use

22

00:00:52,209 --> 00:00:50,839

synchronicity because there are

23

00:00:53,650 --> 00:00:52,219

different definitions but mine is

24

00:00:55,450 --> 00:00:53,660

basically a meaningful coincidence of

25

00:00:59,650 --> 00:00:55,460

physical events that one would otherwise

26
00:01:01,299 --> 00:00:59,660
expect to be random so what I'm going to

27
00:01:04,270 --> 00:01:01,309
say is that a single quantum event is

28
00:01:06,430 --> 00:01:04,280
random but a string of quantum events or

29
00:01:07,870 --> 00:01:06,440
a time line may develop a greater than

30
00:01:10,120 --> 00:01:07,880
likelihood greater than chance

31
00:01:11,980 --> 00:01:10,130
likelihood for a given type of outcome

32
00:01:14,710 --> 00:01:11,990
that is consistent with the belief state

33
00:01:16,749 --> 00:01:14,720
of the experimenter so we're going to

34
00:01:18,850 --> 00:01:16,759
accept obviously that quantum events

35
00:01:20,740 --> 00:01:18,860
collapse into into the eigenstates

36
00:01:22,719 --> 00:01:20,750
randomly but we're going to say that

37
00:01:25,450 --> 00:01:22,729
over time there may be a process that we

38
00:01:27,130 --> 00:01:25,460

can talk about which will lead us to a

39

00:01:29,260 --> 00:01:27,140

particular state that's consistent with

40

00:01:32,469 --> 00:01:29,270

the belief state of the person taking

41

00:01:34,620 --> 00:01:32,479

the action so I'm going to talk about

42

00:01:36,940 --> 00:01:34,630

two separate effects that I've termed

43

00:01:38,649 --> 00:01:36,950

one is a singular value effect and the

44

00:01:40,950 --> 00:01:38,659

other is a history selection effect just

45

00:01:43,209 --> 00:01:40,960

to differentiate them in the discussion

46

00:01:44,980 --> 00:01:43,219

and I'm gonna talk about singular values

47

00:01:47,620 --> 00:01:44,990

explain what they are and as a measure

48

00:01:48,700 --> 00:01:47,630

of belief that's gonna be a core part of

49

00:01:50,139 --> 00:01:48,710

the heart and soul of what I'm talking

50

00:01:51,730 --> 00:01:50,149

about I'm gonna give an example and

51
00:01:55,270 --> 00:01:51,740
we're talking about what our society's

52
00:01:57,279 --> 00:01:55,280
beliefs so some background tools for

53
00:01:59,469 --> 00:01:57,289
those of you who are not physicists a

54
00:02:01,359 --> 00:01:59,479
quantum measurement is generally

55
00:02:03,969 --> 00:02:01,369
described by a positive operator value

56
00:02:05,289 --> 00:02:03,979
the measure a POV M and basically this

57
00:02:07,120 --> 00:02:05,299
is saying that any measurement is

58
00:02:09,100 --> 00:02:07,130
described by a positive operator which

59
00:02:11,980 --> 00:02:09,110
is a matrix that has some special

60
00:02:14,410 --> 00:02:11,990
properties I don't need to go into what

61
00:02:16,600 --> 00:02:14,420
they are for you today but there's also

62
00:02:19,330 --> 00:02:16,610
another fact of linear algebra that a

63
00:02:22,030 --> 00:02:19,340

matrix any matrix can be decomposed into

64

00:02:25,539 --> 00:02:22,040

a combination of

65

00:02:27,039 --> 00:02:25,549

three different other matrices you Sigma

66

00:02:30,729 --> 00:02:27,049

and V transpose that's the T is

67

00:02:31,869 --> 00:02:30,739

transpose and this is if you remember in

68

00:02:33,670 --> 00:02:31,879

fourth and fifth grade when you factor

69

00:02:35,110 --> 00:02:33,680

in numbers you take the number 12 you

70

00:02:37,509 --> 00:02:35,120

can factor it into two times three times

71

00:02:39,940 --> 00:02:37,519

two this is the same thing you're taking

72

00:02:41,410 --> 00:02:39,950

any matrix on the left a this is a four

73

00:02:42,910 --> 00:02:41,420

by four a random one that I created

74

00:02:44,289 --> 00:02:42,920

factoring it into three different

75

00:02:45,970 --> 00:02:44,299

matrices that when you multiply them

76
00:02:48,129 --> 00:02:45,980
together you get the one on the left but

77
00:02:50,649 --> 00:02:48,139
the thing is that these three matrices

78
00:02:53,170 --> 00:02:50,659
have special properties and any matrix

79
00:02:54,580 --> 00:02:53,180
can be described in this way so U and V

80
00:02:56,470 --> 00:02:54,590
has special properties and Σ

81
00:02:58,059 --> 00:02:56,480
especially I'm going to talk about today

82
00:03:00,190 --> 00:02:58,069
it's a diagonal matrix which means it

83
00:03:03,699 --> 00:03:00,200
has zeros on all the elements except for

84
00:03:06,009 --> 00:03:03,709
the diagonal which have these elements

85
00:03:07,390 --> 00:03:06,019
 Σ and those are going to be what I'm

86
00:03:11,979 --> 00:03:07,400
going to relate to the experimenters

87
00:03:13,539 --> 00:03:11,989
belief that's the central piece so the

88
00:03:15,009 --> 00:03:13,549

postulate how do we interpret the SVD

89

00:03:17,020 --> 00:03:15,019

postulate I'm gonna make is the singular

90

00:03:18,399 --> 00:03:17,030

value is Sigma bias the system toward an

91

00:03:21,369 --> 00:03:18,409

outcome that is consistent with the

92

00:03:24,039 --> 00:03:21,379

belief state of the experimenter these

93

00:03:25,089 --> 00:03:24,049

are essentially weights on the quantum

94

00:03:28,509 --> 00:03:25,099

states or on what I'm going to call

95

00:03:30,520 --> 00:03:28,519

histories so again the singular value

96

00:03:31,960 --> 00:03:30,530

decomposition we have a unitary

97

00:03:34,659 --> 00:03:31,970

transformation I'll describe that in a

98

00:03:36,460 --> 00:03:34,669

second a linear combination and then a

99

00:03:38,050 --> 00:03:36,470

unitary transformation in the linear

100

00:03:39,640 --> 00:03:38,060

common linear transformation area is

101
00:03:42,189 --> 00:03:39,650
where we're going to have each of these

102
00:03:44,439 --> 00:03:42,199
values Σ_1 Σ_2 Σ_3 and Σ_4

103
00:03:46,509 --> 00:03:44,449
4 are going to provide a weight or

104
00:03:47,920 --> 00:03:46,519
probability for each particular state

105
00:03:50,649 --> 00:03:47,930
and these are going to be somehow I'm

106
00:03:52,569 --> 00:03:50,659
not going to hypothesize on how but

107
00:03:54,809 --> 00:03:52,579
somehow related to the belief state of

108
00:03:58,599 --> 00:03:54,819
the experiment are taking the action

109
00:04:00,969 --> 00:03:58,609
unitary transformations are special also

110
00:04:03,339 --> 00:04:00,979
special matrices and they describe time

111
00:04:06,759 --> 00:04:03,349
evolution of a system that's undisturbed

112
00:04:08,429 --> 00:04:06,769
so there are a very a nice there are

113
00:04:11,080 --> 00:04:08,439

type of transformation that a

114

00:04:12,520 --> 00:04:11,090

mechanistic or materialistic quantum

115

00:04:13,839 --> 00:04:12,530

physicists would like because they don't

116

00:04:14,469 --> 00:04:13,849

involve any kind of collapse of a

117

00:04:16,599 --> 00:04:14,479

wavefunction

118

00:04:19,210 --> 00:04:16,609

it's just how a system evolves over time

119

00:04:20,920 --> 00:04:19,220

if it's not being just disturbed by a

120

00:04:22,629 --> 00:04:20,930

measurement so you've got two of those

121

00:04:24,010 --> 00:04:22,639

on either side first you transform it

122

00:04:28,930 --> 00:04:24,020

unitarily then you provide this

123

00:04:30,909 --> 00:04:28,940

measurement which is given by these

124

00:04:32,019 --> 00:04:30,919

particular values and this is a little

125

00:04:36,129 --> 00:04:32,029

more controversial and then you've got

126
00:04:37,149 --> 00:04:36,139
another unitary transformation and all

127
00:04:39,399 --> 00:04:37,159
I'll go a little bit more into what

128
00:04:40,570 --> 00:04:39,409
those are so hopefully they're not just

129
00:04:42,879 --> 00:04:40,580
block the numbers for you before you

130
00:04:44,379 --> 00:04:42,889
leave so the example I'm going to use is

131
00:04:45,969 --> 00:04:44,389
slits and Wiseman's experiment

132
00:04:47,619 --> 00:04:45,979
experimenter e effects and the remote

133
00:04:51,129 --> 00:04:47,629
detection of staring so in this

134
00:04:55,300 --> 00:04:51,139
experiment they had an experimenter on

135
00:04:57,879 --> 00:04:55,310
the Left looking at a television feed of

136
00:04:59,649 --> 00:04:57,889
subject in a room and the subject was

137
00:05:01,450 --> 00:04:59,659
doing menial tasks reading a magazine

138
00:05:03,429 --> 00:05:01,460

but they had electrodes hooked up to

139

00:05:05,080 --> 00:05:03,439

their finger and the experimenter was

140

00:05:08,379 --> 00:05:05,090

measuring their conductivity of their

141

00:05:10,990 --> 00:05:08,389

skin for excitement excitability and the

142

00:05:12,820 --> 00:05:11,000

experimenter would go from state for 30

143

00:05:14,680 --> 00:05:12,830

seconds of staring at the person on the

144

00:05:16,300 --> 00:05:14,690

screen to not staring at this person on

145

00:05:18,730 --> 00:05:16,310

the screen for 30 seconds and then

146

00:05:20,350 --> 00:05:18,740

staring for another 30 seconds and not

147

00:05:21,850 --> 00:05:20,360

staring for another 30 seconds and of

148

00:05:24,790 --> 00:05:21,860

course this was controlled there was you

149

00:05:26,680 --> 00:05:24,800

know they changed the order of staring

150

00:05:28,570 --> 00:05:26,690

and not staring it so it was a well

151

00:05:31,689 --> 00:05:28,580

controlled trial and Marilyn Schlitz got

152

00:05:34,540 --> 00:05:31,699

significant results and Richard Wiseman

153

00:05:37,480 --> 00:05:34,550

did not everything about the experiments

154

00:05:41,320 --> 00:05:37,490

were identical same room same protocol

155

00:05:42,459 --> 00:05:41,330

same timeframe and this the experiment

156

00:05:43,540 --> 00:05:42,469

was to try and find out the only thing

157

00:05:45,730 --> 00:05:43,550

that was uncontrolled that was

158

00:05:48,040 --> 00:05:45,740

controlled for or that was a variable

159

00:05:51,070 --> 00:05:48,050

was the actual experiment of himself and

160

00:05:54,579 --> 00:05:51,080

it's very interesting and and should be

161

00:05:55,629 --> 00:05:54,589

repeated so I'm gonna try and talk about

162

00:05:56,649 --> 00:05:55,639

what how that could be is there an

163

00:05:58,959 --> 00:05:56,659

explanation that we can come up with

164

00:06:00,850 --> 00:05:58,969

that's physical physics I don't want it

165

00:06:01,990 --> 00:06:00,860

to be something that we just write off

166

00:06:03,490 --> 00:06:02,000

it needs to be explained

167

00:06:05,680 --> 00:06:03,500

obviously as all of you would agree with

168

00:06:08,200 --> 00:06:05,690

me so the main idea I'm going to present

169

00:06:10,119 --> 00:06:08,210

is main idea one history selection

170

00:06:11,559 --> 00:06:10,129

effect future outcomes are grouped

171

00:06:17,010 --> 00:06:11,569

together according to the nature of the

172

00:06:20,829 --> 00:06:17,020

question posed so in quantum mechanics

173

00:06:22,839 --> 00:06:20,839

we we can start the tools we use often

174

00:06:25,059 --> 00:06:22,849

ours you start with a state a quantum

175

00:06:26,649 --> 00:06:25,069

state P on the left and if you want to

176
00:06:28,629 --> 00:06:26,659
understand what it's doing in the future

177
00:06:30,459 --> 00:06:28,639
you then look at all the different ways

178
00:06:31,959 --> 00:06:30,469
that could evolve over time and the

179
00:06:34,839 --> 00:06:31,969
first time step it might evolve into two

180
00:06:35,920 --> 00:06:34,849
states P plus and P minus and then that

181
00:06:39,640 --> 00:06:35,930
each of those states might evolve

182
00:06:45,639 --> 00:06:39,650
further into P plus plus + P + - + P - +

183
00:06:46,930 --> 00:06:45,649
+ P minus - up here so this happens at

184
00:06:49,120 --> 00:06:46,940
any level that you want to do I've only

185
00:06:51,300 --> 00:06:49,130
done a simple example where it goes into

186
00:06:53,470 --> 00:06:51,310
two states at a time

187
00:06:53,890 --> 00:06:53,480
but these future states over here on the

188
00:06:57,370 --> 00:06:53,900

right

189

00:06:59,620 --> 00:06:57,380

represent states at a future time state

190

00:07:01,480 --> 00:06:59,630

and I can do this without actually

191

00:07:03,219 --> 00:07:01,490

having to wait for them I can actually

192

00:07:04,390 --> 00:07:03,229

predict and look look at a given system

193

00:07:06,490 --> 00:07:04,400

and say well this is how it's going to

194

00:07:08,740 --> 00:07:06,500

evolve over time I can write down an

195

00:07:10,629 --> 00:07:08,750

actual form for the state of a system

196

00:07:13,210 --> 00:07:10,639

and at a future time and I have to

197

00:07:16,810 --> 00:07:13,220

include all of these possible states now

198

00:07:18,730 --> 00:07:16,820

what I'm suggesting is that based on the

199

00:07:20,740 --> 00:07:18,740

question you posed you're going to

200

00:07:24,760 --> 00:07:20,750

you're going to generate a series of

201
00:07:26,290 --> 00:07:24,770
possible future outcomes but it's up to

202
00:07:27,730 --> 00:07:26,300
the experiment of themselves the physicist

203
00:07:30,400 --> 00:07:27,740
in their notebook how they want to group

204
00:07:32,170 --> 00:07:30,410
those outcomes in their in their

205
00:07:35,770 --> 00:07:32,180
calculations and I'm going to suggest

206
00:07:37,540 --> 00:07:35,780
it's always possible to to group them

207
00:07:39,129 --> 00:07:37,550
any way you want as long as you're

208
00:07:41,350 --> 00:07:39,139
consistent there's any number of

209
00:07:43,420 --> 00:07:41,360
different ways to write the final states

210
00:07:45,700 --> 00:07:43,430
here there's not just one correct way

211
00:07:47,980 --> 00:07:45,710
there's any number of different ways to

212
00:07:49,210 --> 00:07:47,990
do it as long as they're consistent and

213
00:07:50,950 --> 00:07:49,220

the whole branch of consistent histories

214

00:07:52,240 --> 00:07:50,960

quantum theory deals with how do you

215

00:07:54,550 --> 00:07:52,250

come up with understanding whether a

216

00:07:57,670 --> 00:07:54,560

system and outcome set is consistent or

217

00:07:59,800 --> 00:07:57,680

not but the idea is that if I ask a

218

00:08:02,110 --> 00:07:59,810

question is it possible to detect when

219

00:08:03,879 --> 00:08:02,120

someone is staring at you then I can

220

00:08:05,830 --> 00:08:03,889

look at all the possible future outcomes

221

00:08:08,350 --> 00:08:05,840

of a situation and group those outcomes

222

00:08:11,650 --> 00:08:08,360

according to situation according to

223

00:08:12,250 --> 00:08:11,660

outcomes that are positive results where

224

00:08:13,870 --> 00:08:12,260

it is

225

00:08:15,159 --> 00:08:13,880

the person does detect that they're

226

00:08:17,620 --> 00:08:15,169

being stared at and negative those

227

00:08:21,310 --> 00:08:17,630

results whether they can they don't

228

00:08:22,810 --> 00:08:21,320

detect being stared at and it's up to

229

00:08:26,080 --> 00:08:22,820

the experiment or how they write those

230

00:08:28,659 --> 00:08:26,090

down and how they group them and that's

231

00:08:30,820 --> 00:08:28,669

our first step this is the same kind of

232

00:08:32,920 --> 00:08:30,830

tree where this initial state branches

233

00:08:34,870 --> 00:08:32,930

out into P plus P minus P plus plus P

234

00:08:36,370 --> 00:08:34,880

plus minus and then these are all the

235

00:08:40,089 --> 00:08:36,380

future States there's 16 of them and

236

00:08:41,620 --> 00:08:40,099

this random example that I created so

237

00:08:43,269 --> 00:08:41,630

I'm gonna define something called

238

00:08:45,990 --> 00:08:43,279

synchronicity States these are just

239

00:08:48,340 --> 00:08:46,000

States when you get an effect where the

240

00:08:51,280 --> 00:08:48,350

experimenter is looking at the person

241

00:08:52,780 --> 00:08:51,290

and the subject says they feel watched

242

00:08:54,550 --> 00:08:52,790

so there's a correlation and apparent

243

00:08:55,540 --> 00:08:54,560

correlation or when the experimenter is

244

00:08:56,680 --> 00:08:55,550

not looking at the subject and the

245

00:08:57,760 --> 00:08:56,690

subject says they do not feel watched

246

00:08:59,829 --> 00:08:57,770

those are both the states that we're

247

00:09:01,000 --> 00:08:59,839

looking for those are the ones we want

248

00:09:03,350 --> 00:09:01,010

to have happen if we have a positive

249

00:09:05,120 --> 00:09:03,360

effect

250

00:09:07,009 --> 00:09:05,130

the states where the experiment is

251
00:09:08,420 --> 00:09:07,019
looking and the subject is saying they

252
00:09:11,449 --> 00:09:08,430
do not feel watch obviously the ones

253
00:09:12,980 --> 00:09:11,459
that would give us an older result so

254
00:09:16,130 --> 00:09:12,990
let's just highlight on our on our graph

255
00:09:19,360 --> 00:09:16,140
here these in my particular example I I

256
00:09:21,319 --> 00:09:19,370
chose those two to be the states that

257
00:09:22,990 --> 00:09:21,329
correspond to those synchronicity events

258
00:09:25,639 --> 00:09:23,000
so those are the positive results and

259
00:09:28,340 --> 00:09:25,649
I've just grouped all the ones that

260
00:09:31,190 --> 00:09:28,350
don't involve any kind of synchronicity

261
00:09:33,470 --> 00:09:31,200
or any kind of positive result into a

262
00:09:35,090 --> 00:09:33,480
different branch over here and then into

263
00:09:36,710 --> 00:09:35,100

this branch over here we also have none

264

00:09:37,880 --> 00:09:36,720

of those synchronicities and so really

265

00:09:40,460 --> 00:09:37,890

the only only branch that has

266

00:09:42,590 --> 00:09:40,470

synchronicity is p + + according to the

267

00:09:45,319 --> 00:09:42,600

way I've grouped it now as long as I'm

268

00:09:46,850 --> 00:09:45,329

consistent I'm allowed to do that so the

269

00:09:51,259 --> 00:09:46,860

question is I haven't really done

270

00:09:52,370 --> 00:09:51,269

anything yet but in in in the

271

00:09:54,230 --> 00:09:52,380

mathematics of it you would start with a

272

00:09:56,300 --> 00:09:54,240

state P minus P plus you're in a

273

00:09:58,340 --> 00:09:56,310

superposition state at the initial time

274

00:09:59,810 --> 00:09:58,350

but you can expand that by looking into

275

00:10:02,650 --> 00:09:59,820

the future so I'm gonna look in the

276

00:10:04,880 --> 00:10:02,660

future and say well I went from time 0 I

277

00:10:06,079 --> 00:10:04,890

jumped it to time - and I said well

278

00:10:07,940 --> 00:10:06,089

what's going on at time 2 I'm gonna

279

00:10:10,370 --> 00:10:07,950

write my system in terms of all the

280

00:10:12,560 --> 00:10:10,380

possible states at time 2 you might

281

00:10:14,000 --> 00:10:12,570

notice that there were 16 earlier of the

282

00:10:15,650 --> 00:10:14,010

final states on the top there were 16

283

00:10:19,370 --> 00:10:15,660

States I've condensed a bunch of them

284

00:10:20,960 --> 00:10:19,380

down into these 4 or in and then I've

285

00:10:22,160 --> 00:10:20,970

left these foreign condensed you you're

286

00:10:23,780 --> 00:10:22,170

also allowed to do that kind of

287

00:10:27,079 --> 00:10:23,790

combinations just to make it easier to

288

00:10:29,269 --> 00:10:27,089

see but basically what I'm doing is

289

00:10:30,620 --> 00:10:29,279

projecting the state of the system into

290

00:10:33,650 --> 00:10:30,630

the future looking at the possible

291

00:10:34,730 --> 00:10:33,660

outcomes and then this is what I call

292

00:10:37,930 --> 00:10:34,740

the library of all the different

293

00:10:40,280 --> 00:10:37,940

possible outcomes and write it down

294

00:10:43,490 --> 00:10:40,290

again here is a picture of those two

295

00:10:45,800 --> 00:10:43,500

states and those correspond to these two

296

00:10:47,870 --> 00:10:45,810

states $p + + 1 s_1$ and this one down here

297

00:10:49,010 --> 00:10:47,880

so those are what I call the the

298

00:10:53,480 --> 00:10:49,020

synchronous new States or the states

299

00:10:55,850 --> 00:10:53,490

that will give me a positive result here

300

00:10:58,310 --> 00:10:55,860

is one important piece the next thing I

301
00:10:59,870 --> 00:10:58,320
do is I take my action on the system and

302
00:11:02,990 --> 00:10:59,880
by taking the action notice I'm taking

303
00:11:05,150 --> 00:11:03,000
it I'm applying the this is right here

304
00:11:08,120 --> 00:11:05,160
from the eye to the Sigma's so the eye

305
00:11:09,650 --> 00:11:08,130
is the operator of my action I'm doing

306
00:11:13,639 --> 00:11:09,660
it all at time two I'm doing it in the

307
00:11:15,560 --> 00:11:13,649
future state and when I apply it to my

308
00:11:17,199 --> 00:11:15,570
eight dimensional vector here it just

309
00:11:18,489 --> 00:11:17,209
multiplies Sigma 1 times the first

310
00:11:19,960 --> 00:11:18,499
Sigma two times the second element and

311
00:11:22,419 --> 00:11:19,970
it just creates a linear transformation

312
00:11:25,629 --> 00:11:22,429
so each of this vector is now weighted

313
00:11:27,699 --> 00:11:25,639

according to the Sigma's so now I have a

314

00:11:29,739 --> 00:11:27,709

future set of possible states that are

315

00:11:32,579 --> 00:11:29,749

weighted by these Sigma's and I'm going

316

00:11:34,929 --> 00:11:32,589

to suggest that these Sigma's are

317

00:11:37,480 --> 00:11:34,939

correlated to the expectation of the

318

00:11:38,710 --> 00:11:37,490

experimenter so now if that's the case

319

00:11:40,689 --> 00:11:38,720

you've now weighted the possible

320

00:11:42,579 --> 00:11:40,699

outcomes by that can be by the expectation

321

00:11:45,220 --> 00:11:42,589

of the experimenter that's a huge leap I

322

00:11:46,329 --> 00:11:45,230

understand that so that's that's what we

323

00:11:50,919 --> 00:11:46,339

might have some questions on and I'll

324

00:11:52,509 --> 00:11:50,929

try to explain more this is the SVD now

325

00:11:54,669 --> 00:11:52,519

let's say instead of having all the

326

00:11:56,710 --> 00:11:54,679

Sigma's be equal let's say sigma v and

327

00:11:58,389 --> 00:11:56,720

sigma 8 are higher than the others this

328

00:12:01,569 --> 00:11:58,399

would correspond to the experimenter

329

00:12:05,679 --> 00:12:01,579

having a higher expectation of outcome 5

330

00:12:06,879 --> 00:12:05,689

or how come 8 and these both correspond

331

00:12:08,109 --> 00:12:06,889

to our synchronicity states so this is

332

00:12:09,939 --> 00:12:08,119

like the experimenter saying I believe

333

00:12:10,989 --> 00:12:09,949

I'm going to get a positive result these

334

00:12:13,269 --> 00:12:10,999

are the these are the states that

335

00:12:14,829 --> 00:12:13,279

correspond to that belief and so these

336

00:12:16,359 --> 00:12:14,839

are the Sigma's that would would be

337

00:12:18,400 --> 00:12:16,369

activated for them or that they would be

338

00:12:22,119 --> 00:12:18,410

that their belief would be causing sigma

339

00:12:24,100 --> 00:12:22,129

v and sigma v 8 to be larger and the

340

00:12:26,829 --> 00:12:24,110

result of that when you multiply it out

341

00:12:28,150 --> 00:12:26,839

is it of course sigma v the v state over

342

00:12:29,679 --> 00:12:28,160

here and the 5th and the 8th state over

343

00:12:33,900 --> 00:12:29,689

here are both larger than the other

344

00:12:39,100 --> 00:12:37,109

again you have the synchronicity States

345

00:12:41,650 --> 00:12:39,110

just to remind you these are the two

346

00:12:43,840 --> 00:12:41,660

states where we're aiming for and then

347

00:12:45,910 --> 00:12:43,850

in here that this is the initial time

348

00:12:48,789 --> 00:12:45,920

this is the final time when we're doing

349

00:12:49,840 --> 00:12:48,799

all these calculations but what I'm

350

00:12:51,999 --> 00:12:49,850

really curious about is what's gonna

351
00:12:56,199 --> 00:12:52,009
happen at the next time step where am I

352
00:12:58,329 --> 00:12:56,209
going to end up at time 1 because at

353
00:12:59,889 --> 00:12:58,339
time 0 I'm here and at time 2 I'm

354
00:13:01,929 --> 00:12:59,899
interested in becoming here or I think

355
00:13:05,559 --> 00:13:01,939
I'm gonna be here well where does the

356
00:13:08,019 --> 00:13:05,569
math lead me to end up here what you do

357
00:13:10,869 --> 00:13:08,029
is you you collapse this vector at time

358
00:13:13,569 --> 00:13:10,879
T 2 down to a vector it I mean yeah down

359
00:13:16,480 --> 00:13:13,579
to a vector at time T 1 which is $P - P -$

360
00:13:18,400 --> 00:13:16,490
plus P plus minus P plus plus you see

361
00:13:20,079 --> 00:13:18,410
these four states those are the same as

362
00:13:22,210 --> 00:13:20,089
these four states here so I'm basically

363
00:13:24,489 --> 00:13:22,220

writing my later state in terms of an

364

00:13:26,829 --> 00:13:24,499

earlier earlier state and the result of

365

00:13:29,919 --> 00:13:26,839

that is that P plus plus is is the only

366

00:13:30,670 --> 00:13:29,929

one that gets larger because this fifth

367

00:13:33,370 --> 00:13:30,680

state in this eights

368

00:13:36,460 --> 00:13:33,380

largerr so my meant the result of my

369

00:13:38,829 --> 00:13:36,470

action if I believe that I will get

370

00:13:40,150 --> 00:13:38,839

positive results is to wait state 5 and

371

00:13:42,519 --> 00:13:40,160

state 8 have more heavily than the

372

00:13:43,960 --> 00:13:42,529

others and therefore to wait the P plus

373

00:13:48,750 --> 00:13:43,970

plus state more heavily than these other

374

00:13:50,860 --> 00:13:48,760

three at time two and that's this state

375

00:13:52,960 --> 00:13:50,870

so what I'm trying to describe is a

376

00:13:56,110 --> 00:13:52,970

process not a physical process where we

377

00:13:58,660 --> 00:13:56,120

are inhibiting the actual physical

378

00:14:06,130 --> 00:13:58,670

nature of sigh I'm saying that there is

379

00:14:07,329 --> 00:14:06,140

a a set of histories or of of timelines

380

00:14:09,070 --> 00:14:07,339

that were more likely to end up in

381

00:14:10,960 --> 00:14:09,080

because we are projecting into the

382

00:14:13,660 --> 00:14:10,970

future and acting as if these states are

383

00:14:16,300 --> 00:14:13,670

going to be real and that leads us to

384

00:14:20,019 --> 00:14:16,310

have a more likely chance to end up in

385

00:14:21,400 --> 00:14:20,029

the state that leads there now this

386

00:14:22,570 --> 00:14:21,410

state is the only one connected to the

387

00:14:23,829 --> 00:14:22,580

synchronicity States and that's why it

388

00:14:26,800 --> 00:14:23,839

ends up being more likely than the other

389

00:14:29,710 --> 00:14:26,810

three states so after this this one

390

00:14:32,230 --> 00:14:29,720

action I've gone from a superposition of

391

00:14:36,519 --> 00:14:32,240

these two states into a more likely hood

392

00:14:38,320 --> 00:14:36,529

of being in this state so the main idea

393

00:14:40,329 --> 00:14:38,330

to is a singular value effect I just

394

00:14:41,740 --> 00:14:40,339

showed that which is that the Sigma are

395

00:14:43,000 --> 00:14:41,750

proposed to be the experimenters level

396

00:14:45,130 --> 00:14:43,010

of confidence or belief that an outcome

397

00:14:47,650 --> 00:14:45,140

is possible so I believe I will obtain

398

00:14:50,019 --> 00:14:47,660

positive results that would create a

399

00:14:53,590 --> 00:14:50,029

higher Sigma for those particular those

400

00:14:55,990 --> 00:14:53,600

particular states so if you want to just

401
00:14:58,120 --> 00:14:56,000
take a quick example I'm not very happy

402
00:14:59,980 --> 00:14:58,130
with the state of this concept in the

403
00:15:02,410 --> 00:14:59,990
mathematics of it it's it's coming along

404
00:15:04,390 --> 00:15:02,420
but I'm not confident yet but just to

405
00:15:07,290 --> 00:15:04,400
show you how these what I've shown you

406
00:15:10,150 --> 00:15:07,300
works out with numbers if you have a

407
00:15:11,710 --> 00:15:10,160
sigma 5 into Sigma 8 slightly higher

408
00:15:13,210 --> 00:15:11,720
than 1 and all the rest of the Sigma's

409
00:15:14,680 --> 00:15:13,220
are slightly lower than 1 to compensate

410
00:15:16,000 --> 00:15:14,690
this is saying that you're going to

411
00:15:17,980 --> 00:15:16,010
weight the fifth state in the eighth

412
00:15:20,650 --> 00:15:17,990
state more heavily or the synchronicity

413
00:15:23,530 --> 00:15:20,660

States more heavily what that leads to

414

00:15:25,720 --> 00:15:23,540

is you have these four states over here

415

00:15:28,060 --> 00:15:25,730

P minus minus P minus plus P plus minus

416

00:15:30,370 --> 00:15:28,070

and P plus plus in the unbiased state

417

00:15:32,110 --> 00:15:30,380

they have a 25% chance of happening in

418

00:15:36,160 --> 00:15:32,120

other words there's a 25% of each of the

419

00:15:39,550 --> 00:15:36,170

states to happen in the bias States with

420

00:15:41,980 --> 00:15:39,560

these values for Sigma 5 and Sigma 8 you

421

00:15:43,329 --> 00:15:41,990

get a slightly less probability for the

422

00:15:44,530 --> 00:15:43,339

first three states and a slightly more

423

00:15:46,090 --> 00:15:44,540

probability for the last

424

00:15:48,820 --> 00:15:46,100

you're slightly more likely in that

425

00:15:52,960 --> 00:15:48,830

moment to end up in a time line that

426

00:15:54,490 --> 00:15:52,970

will have the positive effect it doesn't

427

00:15:56,200 --> 00:15:54,500

mean that you definitely will because

428

00:15:59,260 --> 00:15:56,210

you could still end up in this history

429

00:16:00,850 --> 00:15:59,270

or this history but you actually have a

430

00:16:03,220 --> 00:16:00,860

higher percentage chance because two out

431

00:16:05,080 --> 00:16:03,230

of the four states now have a likelihood

432

00:16:07,480 --> 00:16:05,090

of getting a synchronicity or a positive

433

00:16:09,900 --> 00:16:07,490

result whereas before it was only two

434

00:16:14,140 --> 00:16:09,910

out of 16 states which is a much less

435

00:16:17,290 --> 00:16:14,150

percentage obviously and that's the main

436

00:16:19,810 --> 00:16:17,300

idea I'd like to convey the idea of by

437

00:16:21,220 --> 00:16:19,820

choosing a particular history by

438

00:16:22,870 --> 00:16:21,230

imagining a possible future we're

439

00:16:25,060 --> 00:16:22,880

choosing a particular history and end up

440

00:16:26,230 --> 00:16:25,070

more likely in a situation to have that

441

00:16:27,760 --> 00:16:26,240

happen it doesn't mean it definitely

442

00:16:29,320 --> 00:16:27,770

will happen but it's more likely at that

443

00:16:35,220 --> 00:16:29,330

point because we've self selected into a

444

00:16:39,850 --> 00:16:38,140

so conclusion if we act as if a future

445

00:16:41,500 --> 00:16:39,860

outcome is true we are more likely to

446

00:16:43,180 --> 00:16:41,510

find ourselves in state P plus plus

447

00:16:45,430 --> 00:16:43,190

after a single time step which has

448

00:16:48,700 --> 00:16:45,440

greater likelihood of that state being

449

00:16:51,610 --> 00:16:48,710

true I don't know if that makes sense

450

00:16:54,040 --> 00:16:51,620

the way I put it there but mathematical

451
00:16:55,270 --> 00:16:54,050
model needs to work I need to work more

452
00:16:56,680 --> 00:16:55,280
on it I wasn't finished by the time I

453
00:16:58,660 --> 00:16:56,690
came here I thought I was but it ended

454
00:17:00,760 --> 00:16:58,670
up not being satisfactory so more to

455
00:17:06,189 --> 00:17:00,770
come on that I'm definitely open to

456
00:17:07,990 --> 00:17:06,199
ideas and thoughts summary review every

457
00:17:09,400 --> 00:17:08,000
action by the experimenter first it

458
00:17:11,170 --> 00:17:09,410
groups future outcomes according to the

459
00:17:13,930 --> 00:17:11,180
question posed the history selection

460
00:17:15,810 --> 00:17:13,940
effect by asking the question you're

461
00:17:18,880 --> 00:17:15,820
determining the possible outcomes and

462
00:17:20,350 --> 00:17:18,890
grouping them accordingly doesn't mean

463
00:17:21,610 --> 00:17:20,360

that's the actual outcomes that are all

464

00:17:23,530 --> 00:17:21,620

possible but you're determining it by

465

00:17:25,150 --> 00:17:23,540

the question you asked second you bias

466

00:17:27,370 --> 00:17:25,160

the future states that this person

467

00:17:28,900 --> 00:17:27,380

affects that she expects that's the

468

00:17:30,220 --> 00:17:28,910

singular value effect by applying the

469

00:17:33,340 --> 00:17:30,230

thing of the values you bias the states

470

00:17:34,780 --> 00:17:33,350

and then you write the final state not

471

00:17:35,920 --> 00:17:34,790

in the present but in the next time step

472

00:17:37,270 --> 00:17:35,930

so that you can see what's the

473

00:17:39,070 --> 00:17:37,280

likelihood of getting to the next step

474

00:17:40,420 --> 00:17:39,080

and where will you be most likely when

475

00:17:43,420 --> 00:17:40,430

you get there you'll be closer to those

476

00:17:44,440 --> 00:17:43,430

synchronicities and hopefully the

477

00:17:45,820 --> 00:17:44,450

synchronicities are things that you want

478

00:17:46,960 --> 00:17:45,830

they could also be things you don't want

479

00:17:49,420 --> 00:17:46,970

because what I'm what I'm basically

480

00:17:50,590 --> 00:17:49,430

saying is this has to do with belief now

481

00:17:52,600 --> 00:17:50,600

belief is something that we don't really

482

00:17:53,620 --> 00:17:52,610

understand a whole lot about and

483

00:17:57,160 --> 00:17:53,630

obviously there needs to be more work

484

00:17:58,510 --> 00:17:57,170

done on that but I believe it's I think

485

00:18:01,240 --> 00:17:58,520

it's beliefs not thoughts

486

00:18:03,940 --> 00:18:01,250

influence the outcome there's you know

487

00:18:04,990 --> 00:18:03,950

whole New Age movement of people who who

488

00:18:07,030 --> 00:18:05,000

haven't thought enough about it and

489

00:18:10,450 --> 00:18:07,040

maybe are thinking that an individual

490

00:18:11,590 --> 00:18:10,460

thought can change the potential for

491

00:18:13,360 --> 00:18:11,600

synchronicity or the potential for

492

00:18:15,040 --> 00:18:13,370

outcomes in the future I would say that

493

00:18:16,570 --> 00:18:15,050

individual thoughts can affect your

494

00:18:18,100 --> 00:18:16,580

beliefs if you keep applying them again

495

00:18:18,820 --> 00:18:18,110

and again and again but your beliefs are

496

00:18:20,560 --> 00:18:18,830

like a big ship

497

00:18:21,880 --> 00:18:20,570

that's hard to steer and so it's your

498

00:18:23,830 --> 00:18:21,890

beliefs that are actually determining

499

00:18:27,850 --> 00:18:23,840

the types of synchronicities or the

500

00:18:29,920 --> 00:18:27,860

types of outcomes you'll get and I'll

501
00:18:31,660 --> 00:18:29,930
give an example unintentional belief

502
00:18:34,930 --> 00:18:31,670
from gene ratings experiment I forget

503
00:18:37,720 --> 00:18:34,940
what was called but he did this

504
00:18:41,380 --> 00:18:37,730
experiment where the the meditator is

505
00:18:43,810 --> 00:18:41,390
trying to influence the interference

506
00:18:45,250 --> 00:18:43,820
device in the other room and about

507
00:18:47,260 --> 00:18:45,260
halfway through the experiment he

508
00:18:49,600 --> 00:18:47,270
analyzed the data just on a whim and

509
00:18:51,610 --> 00:18:49,610
from what I remember and found it to be

510
00:18:54,400 --> 00:18:51,620
incredibly positive he was getting

511
00:18:56,770 --> 00:18:54,410
really correlated results and actually

512
00:18:58,900 --> 00:18:56,780
from that point on his results went down

513
00:19:01,390 --> 00:18:58,910

and he didn't explain it in any

514

00:19:03,760 --> 00:19:01,400

particular way but he said it made me

515

00:19:05,380 --> 00:19:03,770

wonder if my knowing that the system

516

00:19:10,300 --> 00:19:05,390

that it was going well and my disbelief

517

00:19:12,430 --> 00:19:10,310

at that fact ruined the future of the

518

00:19:13,780 --> 00:19:12,440

experiment because I when I saw it when

519

00:19:15,310 --> 00:19:13,790

he saw the results he he was in

520

00:19:16,270 --> 00:19:15,320

disbelief he was a pretty good skeptic

521

00:19:17,830 --> 00:19:16,280

and he was like I can't believe this is

522

00:19:20,650 --> 00:19:17,840

working you know I got to keep doing it

523

00:19:22,360 --> 00:19:20,660

but this just it's amazing and so that's

524

00:19:24,430 --> 00:19:22,370

an example of where even though the

525

00:19:25,390 --> 00:19:24,440

person is going through the rest of the

526

00:19:27,430 --> 00:19:25,400

experiment thinking that they're going

527

00:19:29,440 --> 00:19:27,440

to you know do it objectively their

528

00:19:31,930 --> 00:19:29,450

unintentional belief may have been you

529

00:19:33,760 --> 00:19:31,940

know this really isn't possible and they

530

00:19:35,950 --> 00:19:33,770

actually ended up biasing the system as

531

00:19:37,600 --> 00:19:35,960

a result so I would say that thoughts

532

00:19:39,310 --> 00:19:37,610

and actions are important only as much

533

00:19:41,140 --> 00:19:39,320

as they reflect the inner beliefs of the

534

00:19:46,900 --> 00:19:41,150

person doing the action or the

535

00:19:48,010 --> 00:19:46,910

experiment and obviously Brenda Donna's

536

00:19:49,990 --> 00:19:48,020

experienced the inner for the

537

00:19:50,920 --> 00:19:50,000

experimenter effect and I've talked with

538

00:19:52,750 --> 00:19:50,930

her a little bit about that today but

539

00:19:56,350 --> 00:19:52,760

you could probably ask her what her

540

00:19:57,550 --> 00:19:56,360

experiences have been so if I didn't

541

00:19:59,290 --> 00:19:57,560

explain it earlier the experiment of

542

00:20:01,420 --> 00:19:59,300

fact is when the experimenters biases or

543

00:20:02,380 --> 00:20:01,430

preferences actually seems to influence

544

00:20:04,660 --> 00:20:02,390

the outcome of the experiment that

545

00:20:07,900 --> 00:20:04,670

they're doing so why is this important

546

00:20:09,460 --> 00:20:07,910

to society and the paradigm change my

547

00:20:10,870 --> 00:20:09,470

actions what are what are society's

548

00:20:11,600 --> 00:20:10,880

current beliefs well here's a couple of

549

00:20:15,230 --> 00:20:11,610

them that I like to point

550

00:20:16,549 --> 00:20:15,240

now my actions are irrelevant is that

551

00:20:19,370 --> 00:20:16,559

what we think political change is

552

00:20:21,890 --> 00:20:19,380

hopeless alternatives to the commuter

553

00:20:23,419 --> 00:20:21,900

lifestyle are not realistic or changing

554

00:20:25,820 --> 00:20:23,429

to sustainable energy resources is

555

00:20:28,100 --> 00:20:25,830

expensive all of those are things that

556

00:20:30,890 --> 00:20:28,110

could be verified if you want to or

557

00:20:32,660 --> 00:20:30,900

could be unverified if you have

558

00:20:33,740 --> 00:20:32,670

different data it's based on the mind

559

00:20:36,140 --> 00:20:33,750

frame over the person because they're

560

00:20:38,450 --> 00:20:36,150

all speaking about the future and about

561

00:20:39,530 --> 00:20:38,460

things we have no control over what I'm

562

00:20:41,570 --> 00:20:39,540

trying to point out is if we don't

563

00:20:44,440 --> 00:20:41,580

change those beliefs we may cause them

564

00:20:47,360 --> 00:20:44,450

to be true whatever the beliefs are

565

00:20:49,760 --> 00:20:47,370

they're gonna be influenced by the by

566

00:20:51,890 --> 00:20:49,770

these Sigma are our brains affecting

567

00:20:53,600 --> 00:20:51,900

these singular values and affecting the

568

00:20:55,370 --> 00:20:53,610

possible futures that we end up in and

569

00:20:56,870 --> 00:20:55,380

we end up in a possible future where

570

00:20:58,159 --> 00:20:56,880

things that we don't like are coming

571

00:21:01,070 --> 00:20:58,169

true rather than things we don't would

572

00:21:02,870 --> 00:21:01,080

that we do like so it may be of utmost

573

00:21:04,400 --> 00:21:02,880

urgency to imagine the future we wish to

574

00:21:06,799 --> 00:21:04,410

have not the one we were afraid to

575

00:21:14,270 --> 00:21:06,809

happen because we may believe in each of

576

00:21:16,370 --> 00:21:14,280

those just as equally thank you thank

577

00:21:18,950 --> 00:21:16,380

you very much can we have questions let

578

00:21:21,500 --> 00:21:18,960

me ask the first question ask I would

579

00:21:24,650 --> 00:21:21,510

what do you think would be an

580

00:21:29,480 --> 00:21:24,660

explanation for the physical mechanism

581

00:21:31,700 --> 00:21:29,490

yes that would cause beliefs to or even

582

00:21:35,030 --> 00:21:31,710

beliefs I assume were the same as asking

583

00:21:36,110 --> 00:21:35,040

the questions to influence the branching

584

00:21:38,390 --> 00:21:36,120

process because that's what you're

585

00:21:39,409 --> 00:21:38,400

really talking about mm-hmm so what

586

00:21:40,810 --> 00:21:39,419

would the physical mechanism be I

587

00:21:43,150 --> 00:21:40,820

haven't talked about it at all right

588

00:21:49,970 --> 00:21:43,160

that's a great question and I don't know

589

00:21:52,760 --> 00:21:49,980

my interest is in understanding the

590

00:21:57,020 --> 00:21:52,770

nature of the space in which this

591

00:21:59,270 --> 00:21:57,030

branching is happening it's branching

592

00:22:03,200 --> 00:21:59,280

what spaces is in to me this is an

593

00:22:05,240 --> 00:22:03,210

information space and I I would imagine

594

00:22:08,120 --> 00:22:05,250

that a parallels physical space but

595

00:22:10,250 --> 00:22:08,130

obviously is described differently and

596

00:22:11,780 --> 00:22:10,260

in this information space all the future

597

00:22:13,940 --> 00:22:11,790

outcomes are pot that are possible are

598

00:22:16,730 --> 00:22:13,950

already existing in a branch tree like

599

00:22:18,289 --> 00:22:16,740

this so I the work I'm continuing to do

600

00:22:20,659 --> 00:22:18,299

has to do with Fourier transformation

601
00:22:22,970 --> 00:22:20,669
and and how that relates to all the

602
00:22:24,630 --> 00:22:22,980
different possible future outcomes which

603
00:22:27,230 --> 00:22:24,640
are nearly infinite

604
00:22:30,570 --> 00:22:27,240
lower self-selecting two specific

605
00:22:32,760 --> 00:22:30,580
outcomes by this process and physical

606
00:22:34,230 --> 00:22:32,770
mechanism I wonder if it's a physical

607
00:22:35,730 --> 00:22:34,240
mechanism or if somehow it can be

608
00:22:38,130 --> 00:22:35,740
explained by this process of selecting

609
00:22:40,800 --> 00:22:38,140
among those different states and over

610
00:22:41,670 --> 00:22:40,810
time selecting different outcomes but

611
00:22:46,590 --> 00:22:41,680
it's a good question I don't know the

612
00:22:48,420 --> 00:22:46,600
answer Louis guy Emery Mort yeah I'd

613
00:22:51,600 --> 00:22:48,430

like to continue to engage in some

614

00:22:53,570 --> 00:22:51,610

youthful speculation here so continuing

615

00:22:55,890 --> 00:22:53,580

on the question that you were just asked

616

00:22:57,930 --> 00:22:55,900

I'm wondering if you can you've

617

00:22:59,850 --> 00:22:57,940

considered that perhaps beliefs are

618

00:23:04,830 --> 00:22:59,860

actually could be described as like a

619

00:23:08,370 --> 00:23:04,840

Rupert Sheldrake morphic field and as

620

00:23:12,390 --> 00:23:08,380

you put your beliefs out there you and

621

00:23:17,070 --> 00:23:12,400

you actually they somehow act within you

622

00:23:19,520 --> 00:23:17,080

perhaps you dig a canal like Rio dwith

623

00:23:22,130 --> 00:23:19,530

that belief that allows the the ball

624

00:23:26,850 --> 00:23:22,140

synchronistically to more often than not

625

00:23:29,100 --> 00:23:26,860

roll to that five or eight destination

626

00:23:31,890 --> 00:23:29,110

right well I think that this this

627

00:23:33,060 --> 00:23:31,900

process seems to I mean it you know if

628

00:23:34,440 --> 00:23:33,070

you want to accept what I've said so far

629

00:23:36,330 --> 00:23:34,450

which is a big leap of faith to begin

630

00:23:38,300 --> 00:23:36,340

with it seems like it would be

631

00:23:40,380 --> 00:23:38,310

applicable to groups of people that

632

00:23:43,940 --> 00:23:40,390

society's beliefs would also have this

633

00:23:46,770 --> 00:23:43,950

kind of impact scalable in that way so

634

00:23:48,270 --> 00:23:46,780

that would be a way in which you might

635

00:23:51,720 --> 00:23:48,280

model as a channel in the morphic field

636

00:23:54,210 --> 00:23:51,730

and that that seems totally plausible it

637

00:23:55,890 --> 00:23:54,220

may be you could also describe it as if

638

00:23:59,160 --> 00:23:55,900

you have you know hundred million people

639

00:24:01,620 --> 00:23:59,170

all heading down one path which is you

640

00:24:03,240 --> 00:24:01,630

know climate change doesn't exist and we

641

00:24:06,000 --> 00:24:03,250

can use as many fossil fuels as we want

642

00:24:08,430 --> 00:24:06,010

it takes more than a few of us to change

643

00:24:10,380 --> 00:24:08,440

the likelihood that we're gonna get onto

644

00:24:11,880 --> 00:24:10,390

this path with these negative

645

00:24:13,770 --> 00:24:11,890

synchronicities of you know massive

646

00:24:14,970 --> 00:24:13,780

tsunamis or whatever you know this is

647

00:24:18,600 --> 00:24:14,980

the path that these hundred million

648

00:24:19,770 --> 00:24:18,610

people are all pushing us to I would

649

00:24:21,600 --> 00:24:19,780

think that there's some kind of linear

650

00:24:23,520 --> 00:24:21,610

process you know linear addition it

651
00:24:25,890 --> 00:24:23,530
takes an equal number of people or you

652
00:24:28,740 --> 00:24:25,900
know strong people to to push the boat

653
00:24:31,440 --> 00:24:28,750
the other way but I also would say and I

654
00:24:33,030 --> 00:24:31,450
don't want to take too long but this has

655
00:24:35,100 --> 00:24:33,040
only described from a single person's

656
00:24:36,960 --> 00:24:35,110
point of view at a time so I don't know

657
00:24:38,520 --> 00:24:36,970
what to make of the the question of

658
00:24:42,420 --> 00:24:38,530
whether societies fate is really

659
00:24:44,820 --> 00:24:42,430
same as my feet just because there's

660
00:24:47,160 --> 00:24:44,830
some objective society out there making

661
00:24:48,660 --> 00:24:47,170
decisions and creating that morp hic

662
00:24:51,750 --> 00:24:48,670
field I don't know whether whether the

663
00:24:55,550 --> 00:24:51,760

morphic field is objective or not okay I

664

00:25:01,620 --> 00:24:59,550

so if you get to the point where you can

665

00:25:06,270 --> 00:25:01,630

actually discuss what the hidden

666

00:25:09,780 --> 00:25:06,280

variable is that controls the quantum

667

00:25:13,590 --> 00:25:09,790

mechanical process that then will really

668

00:25:15,540 --> 00:25:13,600

have come somewhere I think there's a

669

00:25:18,810 --> 00:25:15,550

twist that you're going to have to make

670

00:25:21,450 --> 00:25:18,820

in order to make this work just as even

671

00:25:25,020 --> 00:25:21,460

as a weight matrix and that is based on

672

00:25:27,360 --> 00:25:25,030

Dean Raiden's Markov chain experiment

673

00:25:30,510 --> 00:25:27,370

that he published in 2006 in the Journal

674

00:25:33,360 --> 00:25:30,520

of scientific exploration so in that

675

00:25:36,480 --> 00:25:33,370

experiment he actually created a

676

00:25:39,270 --> 00:25:36,490

physical manifestation of this set of

677

00:25:42,090 --> 00:25:39,280

states with random number generators and

678

00:25:45,510 --> 00:25:42,100

showed that in fact you cannot make a

679

00:25:47,970 --> 00:25:45,520

weight matrix at the beginning which can

680

00:25:51,030 --> 00:25:47,980

be biased to give you the output that

681

00:25:53,490 --> 00:25:51,040

you're intending instead you've got to

682

00:25:57,410 --> 00:25:53,500

do it retro causally so it's it's a

683

00:26:00,210 --> 00:25:57,420

retro causal pull rather than a forward

684

00:26:02,400 --> 00:26:00,220

causation and so interesting you you'll

685

00:26:04,410 --> 00:26:02,410

need to invert this right temporarily

686

00:26:05,970 --> 00:26:04,420

right thank you and I would love to read

687

00:26:10,730 --> 00:26:05,980

that if you remember and want to send

688

00:26:16,650 --> 00:26:14,180

Juana Costa I enjoyed your presentation

689

00:26:20,340 --> 00:26:16,660

I'm going to share very quick this

690

00:26:22,410 --> 00:26:20,350

little piece I work at a NIH Laboratory

691

00:26:28,710 --> 00:26:22,420

of biophysics for a number of years as a

692

00:26:30,330 --> 00:26:28,720

postdoc long ago and we were doing what

693

00:26:31,770 --> 00:26:30,340

we called voltage clamp experiments

694

00:26:34,800 --> 00:26:31,780

putting two micro electrodes in a cell

695

00:26:37,080 --> 00:26:34,810

and studying currents ionic currents

696

00:26:41,190 --> 00:26:37,090

anyway the only one who could produce

697

00:26:43,380 --> 00:26:41,200

the desired effect was one person and he

698

00:26:44,520 --> 00:26:43,390

was the boss who was running the lab or

699

00:26:47,039 --> 00:26:44,530

chief

700

00:26:49,919 --> 00:26:47,049

and nobody else could reproduce his

701
00:26:53,610 --> 00:26:49,929
results and I sat with him when he was

702
00:26:59,010 --> 00:26:53,620
doing the experiments and I swear he was

703
00:27:02,690 --> 00:26:59,020
using his intention to modify it was so

704
00:27:04,289 --> 00:27:02,700
consistent is there a question in there

705
00:27:10,110 --> 00:27:04,299
that's great

706
00:27:11,630 --> 00:27:10,120
well so yeah and and i would say

707
00:27:14,399 --> 00:27:11,640
intentions ranks up there with thoughts

708
00:27:15,750 --> 00:27:14,409
they are supported by beliefs and if the

709
00:27:17,880 --> 00:27:15,760
person's beliefs about the situation is

710
00:27:21,090 --> 00:27:17,890
strong enough and their intentions would

711
00:27:23,940 --> 00:27:21,100
might be more effective actually I do

712
00:27:26,310 --> 00:27:23,950
have a question and statement so the

713
00:27:29,220 --> 00:27:26,320

statement is in I was involved in some

714

00:27:32,039 --> 00:27:29,230

ganzfeld experiments a while back and I

715

00:27:36,240 --> 00:27:32,049

was a control and I didn't believe that

716

00:27:40,140 --> 00:27:36,250

I could perform as well as the psychics

717

00:27:45,299 --> 00:27:40,150

in the in the study who were chosen for

718

00:27:47,039 --> 00:27:45,309

their abilities and yet I performed

719

00:27:51,390 --> 00:27:47,049

several of those people who believed

720

00:27:53,430 --> 00:27:51,400

that they could perform better so I can

721

00:27:55,919 --> 00:27:53,440

call it an anomaly but how do would you

722

00:27:58,289 --> 00:27:55,929

explain that right well I think that's a

723

00:28:00,810 --> 00:27:58,299

great question and I don't know I think

724

00:28:05,130 --> 00:28:00,820

that again we don't know what belief is

725

00:28:06,960 --> 00:28:05,140

and it is it is a little challenging

726

00:28:08,760 --> 00:28:06,970

sometimes to know whether what we really

727

00:28:10,770 --> 00:28:08,770

believe we might think that we believe

728

00:28:12,330 --> 00:28:10,780

we're not good at something when truly

729

00:28:14,130 --> 00:28:12,340

you know a child has a lot of confidence

730

00:28:15,390 --> 00:28:14,140

that they're good at some things just

731

00:28:17,669 --> 00:28:15,400

because they don't have any knowledge

732

00:28:19,140 --> 00:28:17,679

that they do they don't so I think

733

00:28:20,820 --> 00:28:19,150

beliefs need more understanding and

734

00:28:22,470 --> 00:28:20,830

beliefs can be treacherous

735

00:28:25,380 --> 00:28:22,480

thinking we know what we believe what we

736

00:28:26,490 --> 00:28:25,390

don't believe Nielsen thank you very