



1
00:00:20,380 --> 00:00:14,209
I do if my memory holds I had the

2
00:00:25,750 --> 00:00:20,390
privilege of addressing this group in

3
00:00:31,510 --> 00:00:25,760
1979 for the first time and we have been

4
00:00:36,010 --> 00:00:31,520
fairly regular participants ever since I

5
00:00:42,010 --> 00:00:36,020
never failed to come to this meeting

6
00:00:46,990 --> 00:00:42,020
with a sense of gratitude and respect

7
00:00:51,920 --> 00:00:47,000
for the existence of this unique form

8
00:00:58,760 --> 00:00:51,930
the place where one can come exchange

9
00:01:03,889 --> 00:00:58,770
here it is lofty and nutty ideas with

10
00:01:09,980 --> 00:01:03,899
that with an openness of mind among the

11
00:01:13,100 --> 00:01:09,990
audience a great deal of professional

12
00:01:17,810 --> 00:01:13,110
and technical astuteness

13
00:01:23,590 --> 00:01:17,820

and leave with some benefits for having

14

00:01:28,910 --> 00:01:23,600

having been here I thank you for that

15

00:01:35,149 --> 00:01:28,920

now those of you who have come back from

16

00:01:40,130 --> 00:01:35,159

launch have digested to some degree may

17

00:01:46,990 --> 00:01:40,140

already be asking science of the

18

00:01:51,859 --> 00:01:47,000

subjective again this topic has been

19

00:01:54,940 --> 00:01:51,869

massaged a great deal in our history we

20

00:01:58,670 --> 00:01:54,950

ourselves have written a number of

21

00:02:02,200 --> 00:01:58,680

articles directly addressing the issue

22

00:02:07,039 --> 00:02:02,210

and indirectly addressing the issue

23

00:02:11,210 --> 00:02:07,049

it appears predominantly in our two

24

00:02:12,320 --> 00:02:11,220

books one of which is languishing out

25

00:02:16,430 --> 00:02:12,330

there

26

00:02:20,240 --> 00:02:16,440

Brenda has some complaints about a

27

00:02:23,600 --> 00:02:20,250

little adamant disappearances of copies

28

00:02:26,360 --> 00:02:23,610

and what you do if you want to get one

29

00:02:32,090 --> 00:02:26,370

and there weren't any left please talk

30

00:02:37,180 --> 00:02:32,100

to her about all of that but why are we

31

00:02:41,050 --> 00:02:37,190

the revisiting science little subjective

32

00:02:45,350 --> 00:02:41,060

first of all I point out to you that the

33

00:02:51,640 --> 00:02:45,360

title is rather carefully selected it

34

00:02:57,280 --> 00:02:51,650

says toward a science of the point is

35

00:03:02,590 --> 00:02:57,290

that although we are fully persuaded

36

00:03:05,710 --> 00:03:02,600

over the central importance of the issue

37

00:03:08,780 --> 00:03:05,720

we've still got a long way to go and

38

00:03:14,300 --> 00:03:08,790

we're still looking for a lot of help

39

00:03:18,140 --> 00:03:14,310

here maybe a little bit of that will

40

00:03:25,120 --> 00:03:18,150

spring up it's a consequence what we

41

00:03:32,810 --> 00:03:28,600

presentation in that I come with no

42

00:03:36,610 --> 00:03:32,820

PowerPoint in fact no illustrations at

43

00:03:43,610 --> 00:03:36,620

all I will wave my hands periodically

44

00:03:47,720 --> 00:03:43,620

but no no formal illustrations science

45

00:03:50,090 --> 00:03:47,730

of the subjective first issue would seem

46

00:03:54,170 --> 00:03:50,100

to be if we're going to talk about

47

00:03:57,830 --> 00:03:54,180

science or the subjective we maybe ought

48

00:04:02,900 --> 00:03:57,840

to be sure we agree on the definition of

49

00:04:11,030 --> 00:04:02,910

science what is science in its most

50

00:04:13,130 --> 00:04:11,040

fundamental conceptualization as every

51

00:04:16,909 --> 00:04:13,140

little school child knows

52

00:04:22,820 --> 00:04:16,919

eventually the word derives from the

53

00:04:24,189 --> 00:04:22,830

Latin Spira which means to know to

54

00:04:28,490 --> 00:04:24,199

understand

55

00:04:30,920 --> 00:04:28,500

that's all doesn't tell you what you

56

00:04:34,310 --> 00:04:30,930

have to understand how you have to

57

00:04:39,950 --> 00:04:34,320

understand it it's a search for

58

00:04:44,950 --> 00:04:39,960

knowledge notwithstanding from the days

59

00:04:51,140 --> 00:04:44,960

of Latin the concept of science has

60

00:04:54,640 --> 00:04:51,150

evolved in many ramifications the

61

00:05:00,770 --> 00:04:54,650

distinctions among which may or may not

62

00:05:03,950 --> 00:05:00,780

be important feel if I had brought along

63

00:05:06,590 --> 00:05:03,960

my favorite illustrations I'd have

64

00:05:11,300 --> 00:05:06,600

brought along the one from The New

65

00:05:14,060 --> 00:05:11,310

Yorker many years ago a cartoon of scene

66

00:05:18,439 --> 00:05:14,070

is some kitchen somewhere in an

67

00:05:21,560 --> 00:05:18,449

apartment dwelling there's a sink in it

68

00:05:27,439 --> 00:05:21,570

and there's water running out of the

69

00:05:34,900 --> 00:05:27,449

faucet of the sink see my handy work and

70

00:05:39,500 --> 00:05:34,910

there is a dowdy house lady standing by

71

00:05:44,120 --> 00:05:39,510

hands clasp and admiration and a little

72

00:05:52,010 --> 00:05:44,130

tiny polymer standing by the sink with

73

00:05:57,760 --> 00:05:52,020

the running water saying science this is

74

00:06:07,149 --> 00:06:01,960

science has come to mean bodies of

75

00:06:12,140 --> 00:06:07,159

established knowledge physics chemistry

76
00:06:17,060 --> 00:06:12,150
geology you name it it has come to mean

77
00:06:26,180 --> 00:06:17,070
an orderly study of certain explicit

78
00:06:30,310 --> 00:06:26,190
phenomena earthquakes oceanic issues you

79
00:06:35,330 --> 00:06:30,320
can name them also it is commonly

80
00:06:36,549 --> 00:06:35,340
applied to a body of people who practice

81
00:06:48,669 --> 00:06:36,559
it

82
00:06:53,279 --> 00:06:48,679
topics and those people and those

83
00:07:00,189 --> 00:06:53,289
activities have engendered in our

84
00:07:05,139 --> 00:07:00,199
contemporary societies science says use

85
00:07:12,299 --> 00:07:05,149
this toothpaste science says there is

86
00:07:19,839 --> 00:07:15,639
then there of course there is science

87
00:07:25,809 --> 00:07:19,849
out of the methodology science as a

88
00:07:30,969 --> 00:07:25,819

means of acquiring the knowledge now in

89

00:07:34,149 --> 00:07:30,979

most situations these definitions really

90

00:07:37,299 --> 00:07:34,159

don't make that much difference they

91

00:07:41,649 --> 00:07:37,309

pretty well agree at the end of the day

92

00:07:46,149 --> 00:07:41,659

on what they're specifying but in rare

93

00:07:51,669 --> 00:07:46,159

cases and important cases the

94

00:07:56,319 --> 00:07:51,679

distinctions are important for example

95

00:08:00,299 --> 00:07:56,329

in our work those the distinctions that

96

00:08:05,759 --> 00:08:00,309

have come into it into action on us

97

00:08:10,629 --> 00:08:05,769

they have disagreed on the proper

98

00:08:15,329 --> 00:08:10,639

circumscription of the topics that's not

99

00:08:19,349 --> 00:08:15,339

science our critics well Thomas

100

00:08:23,259 --> 00:08:19,359

they've disagreed similarly on their

101

00:08:27,279 --> 00:08:23,269

definition of the scholars that practice

102

00:08:33,730 --> 00:08:27,289

the science they are not scientists over

103

00:08:39,100 --> 00:08:33,740

there and so on and they certainly have

104

00:08:41,679 --> 00:08:39,110

disagreed on the methodologies now we're

105

00:08:45,579 --> 00:08:41,689

going to take the position here as we

106

00:08:49,150 --> 00:08:45,589

have in our previous numerous

107

00:08:52,629 --> 00:08:49,160

publications on the subject

108

00:09:01,110 --> 00:08:52,639

that when push comes to shove the

109

00:09:08,319 --> 00:09:04,210

science of course has been practiced in

110

00:09:13,139 --> 00:09:08,329

various formats back until that dawn of

111

00:09:18,160 --> 00:09:13,149

history but I think most of us would

112

00:09:22,780 --> 00:09:18,170

associate with the definition that of

113

00:09:28,480 --> 00:09:22,790

modern science that Sir Francis Bacon

114

00:09:31,720 --> 00:09:28,490

offered a few centuries back we can go

115

00:09:34,210 --> 00:09:31,730

into a history lesson of why he was

116

00:09:37,509 --> 00:09:34,220

pushed into this definition about his

117

00:09:39,670 --> 00:09:37,519

quarrels with the church and whatnot but

118

00:09:44,550 --> 00:09:39,680

at the end of the day what bacon was

119

00:09:49,329 --> 00:09:44,560

saying stripped down to its underwear

120

00:09:54,929 --> 00:09:49,339

science has to be a dialogue between

121

00:09:58,629 --> 00:09:54,939

empirical experience experiment and

122

00:10:02,139 --> 00:09:58,639

theoretical conceptualization modeling

123

00:10:05,679 --> 00:10:02,149

each must inform the other you do

124

00:10:10,110 --> 00:10:05,689

experiments you get results you then try

125

00:10:13,900 --> 00:10:10,120

to interpret them again some model or

126

00:10:17,639 --> 00:10:13,910

you conceive some model and then you go

127

00:10:22,059 --> 00:10:17,649

off and do some experiments to test it

128

00:10:27,429 --> 00:10:22,069

he was quite florid in his writing about

129

00:10:31,179 --> 00:10:27,439

this just digress a bit he said the

130

00:10:34,540 --> 00:10:31,189

problem with my science today and my

131

00:10:36,699 --> 00:10:34,550

scientist community it's if there's one

132

00:10:39,610 --> 00:10:36,709

branch you over here like a bunch of

133

00:10:42,939 --> 00:10:39,620

ants that doesn't do anything but

134

00:10:48,030 --> 00:10:42,949

collect the results they get data and

135

00:10:51,790 --> 00:10:48,040

they store it up in there and cavities

136

00:10:54,850 --> 00:10:51,800

without making any increase in their

137

00:10:57,639 --> 00:10:54,860

knowledge on the other hand he said I've

138

00:11:02,300 --> 00:10:57,649

got a bunch of colleagues who like

139

00:11:06,110 --> 00:11:02,310

spiders spend theoretical webs

140

00:11:10,250 --> 00:11:06,120

out of the ether never bothering to

141

00:11:15,260 --> 00:11:10,260

check whether they work real science he

142

00:11:18,040 --> 00:11:15,270

says must engage these true capabilities

143

00:11:22,910 --> 00:11:18,050

of the human mind

144

00:11:25,850 --> 00:11:22,920

we had a paraphrasing of it in one of

145

00:11:30,740 --> 00:11:25,860

our books we call to the scientific to

146

00:11:34,190 --> 00:11:30,750

step our science must go florid doing

147

00:11:37,280 --> 00:11:34,200

stuff and testing what it's doing

148

00:11:41,240 --> 00:11:37,290

lurching back and forth from the

149

00:11:45,550 --> 00:11:41,250

theoretical foot to the experimental

150

00:11:50,150 --> 00:11:45,560

foot testing one against the other and

151
00:11:57,230 --> 00:11:50,160
by the way keep your eye out for the

152
00:12:02,680 --> 00:11:57,240
anomalous stuff it's not that says that

153
00:12:06,050 --> 00:12:02,690
theory is wrong the stuff that says this

154
00:12:12,620 --> 00:12:06,060
empirical evidence doesn't agree with

155
00:12:15,260 --> 00:12:12,630
that theory and oh by the way bacon knew

156
00:12:18,980 --> 00:12:15,270
all about anomalies he spent a lot of

157
00:12:22,490 --> 00:12:18,990
his time doing experiments that would

158
00:12:25,970 --> 00:12:22,500
have been quite valid to our work today

159
00:12:34,100 --> 00:12:25,980
he'd have been a good member of the FCC

160
00:12:38,360 --> 00:12:34,110
if we could have kept him around now the

161
00:12:43,400 --> 00:12:38,370
science there for methodologically needs

162
00:12:45,829 --> 00:12:43,410
to search for its platform of dialogue

163
00:12:46,820 --> 00:12:45,839

between theory and experiment but it

164

00:12:50,810 --> 00:12:46,830

must do it

165

00:12:55,340 --> 00:12:50,820

in a disciplined fashion it must be

166

00:12:57,410 --> 00:12:55,350

rigorous in that methodology but it must

167

00:13:00,800 --> 00:12:57,420

also be open-minded

168

00:13:04,640 --> 00:13:00,810

it must be humble in the face of

169

00:13:10,160 --> 00:13:04,650

empirical evidence and it must respect

170

00:13:15,380 --> 00:13:10,170

the work of others and to that extent I

171

00:13:20,120 --> 00:13:15,390

think we can sign on to his search

172

00:13:24,550 --> 00:13:20,130

for a science of the subjective that has

173

00:13:28,699 --> 00:13:24,560

the essential dialogue openly pursue it

174

00:13:33,769 --> 00:13:28,709

respectfully pursue it and hopefully to

175

00:13:40,639 --> 00:13:33,779

deliver food to get us closer to a

176
00:13:43,930 --> 00:13:40,649
science now if this methodology is going

177
00:13:47,660 --> 00:13:43,940
to work it's going to need something

178
00:13:53,230 --> 00:13:47,670
that is going to be a problem here it's

179
00:14:07,150 --> 00:13:57,670
modern science traditional of science

180
00:14:10,940 --> 00:14:07,160
has evolved from a evolutionary chain of

181
00:14:14,449 --> 00:14:10,950
conceptual currencies you look in any

182
00:14:18,440 --> 00:14:14,459
scientific category and you find it

183
00:14:21,939 --> 00:14:18,450
starting looking at matter substance

184
00:14:26,840 --> 00:14:21,949
mass something that dealt with the

185
00:14:32,889 --> 00:14:26,850
substance of the field it then moved on

186
00:14:35,329 --> 00:14:32,899
to matters of energy kinetic energy

187
00:14:39,189 --> 00:14:35,339
electromagnetic energy nuclear energy

188
00:14:43,670 --> 00:14:39,199

whatever a means that was not

189

00:14:47,420 --> 00:14:43,680

substantive but the formative means that

190

00:14:50,420 --> 00:14:47,430

did things and then eventually and

191

00:14:54,680 --> 00:14:50,430

whether you're talking physics chemistry

192

00:14:59,090 --> 00:14:54,690

biology or whatnot you eventually come

193

00:15:02,210 --> 00:14:59,100

to the currency of information now

194

00:15:06,500 --> 00:15:02,220

clearly as we search for a science of

195

00:15:08,240 --> 00:15:06,510

the subjective the priorities there are

196

00:15:12,199 --> 00:15:08,250

going to be a little different than what

197

00:15:17,170 --> 00:15:12,209

has been going on traditionally up to

198

00:15:24,829 --> 00:15:21,319

problem is where as mass matter of

199

00:15:28,780 --> 00:15:24,839

substance whatnot is tangible

200

00:15:32,900 --> 00:15:28,790

you can specify it you can way that you

201

00:15:37,280 --> 00:15:32,910

baingan against itself and whereas

202

00:15:41,300 --> 00:15:37,290

energy he has meteors and other means of

203

00:15:45,710 --> 00:15:41,310

the diagnosed it information gets

204

00:15:49,820 --> 00:15:45,720

Messier and but it gets Messier in a way

205

00:15:53,120 --> 00:15:49,830

that impacts others peculiarly it gets

206

00:15:58,070 --> 00:15:53,130

Messier because information comes in two

207

00:16:01,400 --> 00:15:58,080

pops pop number one we'll call objective

208

00:16:07,940 --> 00:16:01,410

information it's the stuff you can

209

00:16:12,829 --> 00:16:07,950

measure yourself you can compound in

210

00:16:17,800 --> 00:16:12,839

some in some reasonable recipe it's the

211

00:16:20,030 --> 00:16:17,810

it's the stuff that you can go out and

212

00:16:23,269 --> 00:16:20,040

experience directly

213

00:16:29,900 --> 00:16:23,279

it comes with numbers attached you can

214

00:16:34,310 --> 00:16:29,910

quantify it even in a modern business of

215

00:16:39,680 --> 00:16:34,320

the computer ages there is an objective

216

00:16:43,280 --> 00:16:39,690

information capability but there's also

217

00:16:45,440 --> 00:16:43,290

the other bucket the subject of

218

00:16:49,579 --> 00:16:45,450

information and now we're getting close

219

00:16:53,930 --> 00:16:49,589

to our mark because there is no one who

220

00:16:58,550 --> 00:16:53,940

will deny that whereas how hard the

221

00:17:02,000 --> 00:16:58,560

baseball is hit or how deeply we dig the

222

00:17:07,329 --> 00:17:02,010

well are not important parts of the

223

00:17:11,240 --> 00:17:07,339

information bucket also there are the

224

00:17:15,679 --> 00:17:11,250

subjective factors what does it mean to

225

00:17:20,660 --> 00:17:15,689

us how important is it do I have any

226

00:17:23,270 --> 00:17:20,670

resonance with it do I love it what what

227

00:17:26,360 --> 00:17:23,280

are we gonna do with subjective

228

00:17:29,990 --> 00:17:26,370

information if we're gonna go forward

229

00:17:36,549 --> 00:17:30,000

with a science little subjective pretty

230

00:17:41,120 --> 00:17:36,559

fundamental issue if you were to query a

231

00:17:42,729 --> 00:17:41,130

broader academic scientific community

232

00:17:47,869 --> 00:17:42,739

with the question

233

00:17:51,950 --> 00:17:47,879

can or indeed should science mess around

234

00:17:56,899 --> 00:17:51,960

with subjective information he would get

235

00:18:00,560 --> 00:17:56,909

a broad spectrum of every sponsors the

236

00:18:04,159 --> 00:18:00,570

so-called exact sciences I would say he

237

00:18:07,639 --> 00:18:04,169

styled on the fellas would probably say

238

00:18:10,219 --> 00:18:07,649

no we don't want to mess with that we

239

00:18:13,609 --> 00:18:10,229

don't know how to quantify it we don't

240

00:18:16,759 --> 00:18:13,619

know how to specify it we don't even

241

00:18:19,989 --> 00:18:16,769

believe fine it it's gonna mess up the

242

00:18:24,820 --> 00:18:19,999

game no stay out of it

243

00:18:27,379 --> 00:18:24,830

however if they were a little more

244

00:18:31,039 --> 00:18:27,389

circumspect about it they would note

245

00:18:33,729 --> 00:18:31,049

that the earliest Sciences and we're

246

00:18:36,710 --> 00:18:33,739

going back beyond the alchemical

247

00:18:40,899 --> 00:18:36,720

traditions into the hermetic terribly

248

00:18:44,599 --> 00:18:40,909

Jews into the Egyptian stuff and beyond

249

00:18:51,049 --> 00:18:44,609

we're very heavily loaded with

250

00:18:54,759 --> 00:18:51,059

subjective information they would also

251

00:18:58,460 --> 00:18:54,769

note that some of their most revered

252

00:19:02,289 --> 00:18:58,470

philosophers of science and they still

253

00:19:05,649 --> 00:19:02,299

like to call them the salawa was a PhD

254

00:19:08,719 --> 00:19:05,659

scientist that some of those

255

00:19:12,409 --> 00:19:08,729

philosophers of science would also be

256

00:19:17,149 --> 00:19:12,419

out with a resounding yes it's got to be

257

00:19:20,060 --> 00:19:17,159

in there think of William James for

258

00:19:25,089 --> 00:19:20,070

example I'll read you one of his more

259

00:19:29,419 --> 00:19:25,099

famous quotations the spirit and

260

00:19:33,589 --> 00:19:29,429

principles of science are mere affairs

261

00:19:37,359 --> 00:19:33,599

of method there is nothing in them that

262

00:19:39,969 --> 00:19:37,369

need Hinderer science from dealing

263

00:19:43,609 --> 00:19:39,979

successfully with a world in which

264

00:19:46,700 --> 00:19:43,619

personal forces are the starting point

265

00:19:49,940 --> 00:19:46,710

of the new effects the only form of the

266

00:19:53,620 --> 00:19:49,950

thing that we directly encounter the

267

00:19:57,790 --> 00:19:53,630

only experience that we concretely have

268

00:20:01,320 --> 00:19:57,800

is our own personal life the only

269

00:20:05,050 --> 00:20:01,330

completed a category of our thinking our

270

00:20:09,060 --> 00:20:05,060

professor is of a philosophy tell us is

271

00:20:12,340 --> 00:20:09,070

the category of personality and this

272

00:20:17,280 --> 00:20:12,350

systematic denial on the science is part

273

00:20:20,820 --> 00:20:17,290

of personality as a condition of events

274

00:20:24,490 --> 00:20:20,830

the rigorous belief that at the own

275

00:20:29,620 --> 00:20:24,500

essential and innermost nature our world

276

00:20:33,730 --> 00:20:29,630

is a strictly impersonal world may

277

00:20:37,540 --> 00:20:33,740

conceivably as the whirligig of time nor

278

00:20:40,810 --> 00:20:37,550

was around proved to be the very defect

279

00:20:45,420 --> 00:20:40,820

that our descendants will be most

280

00:20:49,870 --> 00:20:45,430

surprised that in our boasted science

281

00:20:53,320 --> 00:20:49,880

the omission that to their eyes will

282

00:20:58,680 --> 00:20:53,330

most tend to make it look perspective

283

00:21:01,630 --> 00:20:58,690

list and shorten there is an

284

00:21:05,950 --> 00:21:01,640

intellectual damnation that somebody

285

00:21:08,050 --> 00:21:05,960

should be paying attention to it the

286

00:21:13,120 --> 00:21:08,060

same sort of stuff can be found

287

00:21:16,120 --> 00:21:13,130

elsewhere you can find it in on rebecca

288

00:21:18,520 --> 00:21:16,130

soni we can find it in ernst mach you

289

00:21:22,000 --> 00:21:18,530

can find it in carl jung as was

290

00:21:25,800 --> 00:21:22,010

mentioned earlier today you can find it

291

00:21:29,860 --> 00:21:25,810

in the patriarchs of quantum science

292

00:21:31,840 --> 00:21:29,870

it's there in plunk it's there in poly

293

00:21:36,090 --> 00:21:31,850

it's there in treating her

294

00:21:39,480 --> 00:21:36,100

it certainly is there in war they all

295

00:21:43,230 --> 00:21:39,490

recognize that the end of the day that

296

00:21:48,610 --> 00:21:43,240

subjective information had to be in

297

00:21:52,300 --> 00:21:48,620

their science eventually they did agree

298

00:21:54,190 --> 00:21:52,310

on that they also agreed that somebody

299

00:21:57,940 --> 00:21:54,200

was going to have to get them some

300

00:22:00,760 --> 00:21:57,950

better empirical evidence of how to do

301

00:22:05,450 --> 00:22:00,770

it and I think we're still searching for

302

00:22:13,290 --> 00:22:09,720

certainly our modern work and the work

303

00:22:16,440 --> 00:22:13,300

of these people in which we are

304

00:22:17,940 --> 00:22:16,450

surrounded today comes out with the

305

00:22:23,150 --> 00:22:17,950

resounding yes

306

00:22:26,970 --> 00:22:23,160

yes to the same question why because

307

00:22:31,560 --> 00:22:26,980

empirically we find that our correlates

308

00:22:34,790 --> 00:22:31,570

in our attempts to do an empirical

309

00:22:40,820 --> 00:22:34,800

theoretical dialogue are karlitz as

310

00:22:44,820 --> 00:22:40,830

observed in those empirical studies are

311

00:22:48,690 --> 00:22:44,830

subjective the phenomena do not

312

00:22:51,660 --> 00:22:48,700

correlate worth a thing with objective

313

00:22:54,390 --> 00:22:51,670

stuff they don't correlate with space

314

00:22:56,340 --> 00:22:54,400

they don't correlate with time they

315

00:22:59,610 --> 00:22:56,350

don't correlate with the machines that

316

00:23:03,180 --> 00:22:59,620

you're doing your experiments on they

317

00:23:06,200 --> 00:23:03,190

correlate with mood with passions with

318

00:23:09,320 --> 00:23:06,210

emotional aspects of the interactions

319

00:23:13,950 --> 00:23:09,330

how can you do a science of the

320

00:23:24,240 --> 00:23:13,960

subjective and ignore the subjective

321

00:23:29,700 --> 00:23:24,250

information in our lengthy panorama of

322

00:23:33,810 --> 00:23:29,710

empirical presentations the the archival

323

00:23:39,650 --> 00:23:33,820

articles the books and whatnot you can

324

00:23:46,290 --> 00:23:39,660

read about an almost endless string of

325

00:23:51,800 --> 00:23:46,300

display that human consciousness is

326

00:23:56,400 --> 00:23:51,810

capable of inserting or extracting

327

00:23:59,000 --> 00:23:56,410

objective objective information from

328

00:24:03,200 --> 00:23:59,010

today that's like all systems good

329

00:24:08,360 --> 00:24:03,210

that's what we wanted to go problem the

330

00:24:13,250 --> 00:24:08,370

correlations of that interaction that

331

00:24:15,590 --> 00:24:13,260

objective change in the physical world

332

00:24:38,240 --> 00:24:15,600

our subjective

333

00:24:45,020 --> 00:24:40,490

this of course is where the shoe is

334

00:24:50,930 --> 00:24:45,030

binding as we speak today we can sit

335

00:24:53,540 --> 00:24:50,940

here and continue to gesticulate about

336

00:24:57,020 --> 00:24:53,550

how important the inclusion of the

337

00:25:01,370 --> 00:24:57,030

subjective factors in our new science

338

00:25:06,230 --> 00:25:01,380

may be but how do you do it how do you

339

00:25:09,920 --> 00:25:06,240

quantify subjective parameters how do

340

00:25:14,350 --> 00:25:09,930

you even define them in some way that

341

00:25:18,740 --> 00:25:14,360

allows communication and dialogue and

342

00:25:21,400 --> 00:25:18,750

worst of all how do you replicate and

343

00:25:24,260 --> 00:25:21,410

everyone in this room know it was

344

00:25:28,310 --> 00:25:24,270

replication is the whipping boy of our

345

00:25:31,370 --> 00:25:28,320

of our work that stuff works one day it

346

00:25:33,470 --> 00:25:31,380

doesn't work the next day it works so

347

00:25:34,430 --> 00:25:33,480

with this Ferguson it doesn't work with

348

00:25:38,000 --> 00:25:34,440

that person

349

00:25:41,870 --> 00:25:38,010

it works with this person now it doesn't

350

00:25:46,610 --> 00:25:41,880

work with that person tomorrow how does

351

00:25:51,440 --> 00:25:46,620

one deal with this part of the

352

00:25:55,130 --> 00:25:51,450

subjective information pattern I don't

353

00:25:58,250 --> 00:25:55,140

think we know I don't think we know but

354

00:26:01,850 --> 00:25:58,260

I think we have at least clarity on the

355

00:26:06,320 --> 00:26:01,860

point that the science cause science

356

00:26:11,180 --> 00:26:06,330

cannot advance into such foreign

357

00:26:16,310 --> 00:26:11,190

territory as our work represents without

358

00:26:19,930 --> 00:26:16,320

assigning some priority to the proactive

359

00:26:24,400 --> 00:26:19,940

capacities of consciousness and

360

00:26:28,460 --> 00:26:24,410

therefore we must now have as a prior

361

00:26:32,560 --> 00:26:28,470

ingredient in our search for a science

362

00:26:36,850 --> 00:26:32,570

with this objective we must have a

363

00:26:40,640 --> 00:26:36,860

science of consciousness a physics of

364

00:26:47,480 --> 00:26:40,650

consciousness if you will and we are not

365

00:26:50,300 --> 00:26:47,490

talking here neurological issues all

366

00:26:52,040 --> 00:26:50,310

that much there are many people in this

367

00:26:55,820 --> 00:26:52,050

room don't get me wrong

368

00:27:00,440 --> 00:26:55,830

are doing superb pieces of research on

369

00:27:03,230 --> 00:27:00,450

the role of neurological function in the

370

00:27:06,190 --> 00:27:03,240

subjective information processing

371

00:27:09,380 --> 00:27:06,200

business and that needs to be

372

00:27:13,340 --> 00:27:09,390

acknowledged and digested and properly

373

00:27:16,750 --> 00:27:13,350

applied what is the brain doing when are

374

00:27:21,470 --> 00:27:16,760

anomalies our subjective information

375

00:27:25,360 --> 00:27:21,480

processes are going on but at the end of

376

00:27:30,140 --> 00:27:25,370

the day it can't be the whole picture

377

00:27:33,430 --> 00:27:30,150

from many years back my esteemed

378

00:27:38,510 --> 00:27:33,440

colleague Brenda who is fond of saying

379

00:27:44,240 --> 00:27:38,520

looking for a consciousness in the human

380

00:27:50,480 --> 00:27:44,250

brain looking for a subjectivity in the

381

00:27:54,560 --> 00:27:50,490

human brain is like looking for the late

382

00:28:00,950 --> 00:27:54,570

night show proponents inside the

383

00:28:03,290 --> 00:28:00,960

television set there's more to it than

384

00:28:12,280 --> 00:28:03,300

that and we don't know how to do without

385

00:28:16,370 --> 00:28:12,290

more I need the wine this up obviously

386

00:28:20,540 --> 00:28:16,380

in our references and there are many you

387

00:28:23,830 --> 00:28:20,550

can see a lot of the ramifications

388

00:28:28,100 --> 00:28:23,840

although things you can I think

389

00:28:30,710 --> 00:28:28,110

reasonably say okay all you this you

390

00:28:34,540 --> 00:28:30,720

don't understand what do you understand

391

00:28:39,590 --> 00:28:34,550

well we have been able to accumulate

392

00:28:41,800 --> 00:28:39,600

some sort of a recipe for how you play

393

00:28:45,680 --> 00:28:41,810

in this field

394

00:28:50,260 --> 00:28:45,690

it was articulated in a more recent

395

00:28:53,840 --> 00:28:50,270

article of ours you can find in je and

396

00:28:56,900 --> 00:28:53,850

also repeated in some of the more recent

397

00:29:01,970 --> 00:28:56,910

books under the title of change the

398

00:29:03,740 --> 00:29:01,980

rules and essentially it says you are

399

00:29:05,910 --> 00:29:03,750

going to get there from here

400

00:29:11,330 --> 00:29:05,920

if you try to play

401
00:29:16,170 --> 00:29:11,340
by the prevailing rules of objective

402
00:29:19,560 --> 00:29:16,180
replicable or dynamical causal of

403
00:29:21,600 --> 00:29:19,570
science things have to have to change

404
00:29:25,620 --> 00:29:21,610
you've got to have a different rule

405
00:29:28,890 --> 00:29:25,630
system there are over arches here are

406
00:29:32,100 --> 00:29:28,900
science other that's subjective and we

407
00:29:35,430 --> 00:29:32,110
know it's got to include things that are

408
00:29:38,760 --> 00:29:35,440
not in conventional science it's got to

409
00:29:43,050 --> 00:29:38,770
have a proactive consciousness a

410
00:29:48,500 --> 00:29:43,060
consciousness that can produce objective

411
00:29:53,250 --> 00:29:48,510
physical effects with subjective

412
00:29:58,350 --> 00:29:53,260
correlations those correlations must

413
00:30:02,250 --> 00:29:58,360

involve things like intention what do

414

00:30:04,200 --> 00:30:02,260

you want to happen they must involve

415

00:30:08,610 --> 00:30:04,210

things like resonance

416

00:30:11,460 --> 00:30:08,620

how can you somehow relate how can you

417

00:30:15,840 --> 00:30:11,470

establish a bond between yourself and

418

00:30:19,020 --> 00:30:15,850

that machine or a bond between yourself

419

00:30:22,220 --> 00:30:19,030

and that other person our bond between

420

00:30:27,270 --> 00:30:22,230

yourself and that remote perception

421

00:30:30,860 --> 00:30:27,280

target how do you get the resonance that

422

00:30:35,970 --> 00:30:30,870

foster is subjective information

423

00:30:39,930 --> 00:30:35,980

exchange you must include something

424

00:30:44,420 --> 00:30:39,940

about attitude we spoke of openness but

425

00:30:48,050 --> 00:30:44,430

it turns out you can you can observe

426
00:30:52,730 --> 00:30:48,060
empirically that it helps if you proceed

427
00:30:57,590 --> 00:30:52,740
with levity with a light heartedness

428
00:31:02,330 --> 00:30:57,600
that you proceed with in a well-defined

429
00:31:06,680 --> 00:31:02,340
personal meaning of personal conduct a

430
00:31:11,340 --> 00:31:06,690
personal purpose that prevails over the

431
00:31:14,130 --> 00:31:11,350
interaction it also becomes quite clear

432
00:31:18,680 --> 00:31:14,140
and we heard some good stuff about this

433
00:31:19,769 --> 00:31:18,690
earlier today a lot of this is going on

434
00:31:23,700 --> 00:31:19,779
unconscious

435
00:31:27,299 --> 00:31:23,710
sleep down there it's going on somewhere

436
00:31:30,629 --> 00:31:27,309
where we are not tracking it its

437
00:31:35,700 --> 00:31:30,639
bubbling up into the conscious but the

438
00:31:40,019 --> 00:31:35,710

source is somehow down there we wrote a

439

00:31:42,839 --> 00:31:40,029

model we called m5 what you can also go

440

00:31:45,629 --> 00:31:42,849

away and read about it talks about the

441

00:31:49,909 --> 00:31:45,639

role of unconscious processing in

442

00:31:56,070 --> 00:31:49,919

getting this subjective information

443

00:31:59,669 --> 00:31:56,080

capacity legitimized other strange

444

00:32:04,459 --> 00:31:59,679

things have come out of more than three

445

00:32:10,249 --> 00:32:04,469

decades of empirical study empirical

446

00:32:12,060 --> 00:32:10,259

objective study gender is important

447

00:32:16,070 --> 00:32:12,070

women and men

448

00:32:20,899 --> 00:32:16,080

do not do it the same way and these

449

00:32:26,450 --> 00:32:20,909

distinctions are replicable they are

450

00:32:30,539 --> 00:32:26,460

clear they are of consequential size

451
00:32:32,869 --> 00:32:30,549
something is going on differently with

452
00:32:37,820 --> 00:32:32,879
the females and with the males

453
00:32:41,339 --> 00:32:37,830
does it speak to a biological overtone

454
00:32:46,469 --> 00:32:41,349
does it speak to an evolutionary aspect

455
00:32:49,169 --> 00:32:46,479
I don't know Brenda what could speak to

456
00:32:52,649 --> 00:32:49,179
that for our better than I but there is

457
00:32:56,190 --> 00:32:52,659
no doubt empirically that men and women

458
00:33:02,810 --> 00:32:56,200
are different when it comes to this

459
00:33:06,389 --> 00:33:02,820
domain of science and not least of all

460
00:33:11,700 --> 00:33:06,399
very importantly there has to come a

461
00:33:16,349 --> 00:33:11,710
respect for uncertainty uncertainty is

462
00:33:20,329 --> 00:33:16,359
the raw material out of which our

463
00:33:24,649 --> 00:33:20,339

consciousness our minds are able to

464

00:33:27,779 --> 00:33:24,659

construct their modifications of

465

00:33:31,379 --> 00:33:27,789

traditional behavior this is a

466

00:33:33,610 --> 00:33:31,389

probabilistic business and whether it is

467

00:33:36,879 --> 00:33:33,620

sources quantum mechanics

468

00:33:39,940 --> 00:33:36,889

whether it's neurological whether it's

469

00:33:43,779 --> 00:33:39,950

impressionistic doesn't seem to matter

470

00:33:47,529 --> 00:33:43,789

but you'd better give yourself the

471

00:33:52,509 --> 00:33:47,539

errorbar of capacity if you want to

472

00:33:56,529 --> 00:33:52,519

assemble a new effect out of all of this

473

00:34:02,919 --> 00:33:56,539

you also have to withdraw to some degree

474

00:34:07,200 --> 00:34:02,929

the ontological aspirations of your

475

00:34:10,329 --> 00:34:07,210

science I think most of our science

476

00:34:12,790 --> 00:34:10,339

family would like to think that what

477

00:34:16,589 --> 00:34:12,800

they have discovered what they have

478

00:34:19,839 --> 00:34:16,599

postulated what they have contended is

479

00:34:25,030 --> 00:34:19,849

basically how the world works its

480

00:34:28,599 --> 00:34:25,040

ontological basic unfortunately I think

481

00:34:31,379 --> 00:34:28,609

that's not the case I think we are still

482

00:34:36,819 --> 00:34:31,389

somewhere way up in the epistemological

483

00:34:43,270 --> 00:34:36,829

level namely we are looking at what we

484

00:34:45,550 --> 00:34:43,280

are looking at it is we who are doing

485

00:34:50,099 --> 00:34:45,560

the experiments it is we who are

486

00:34:55,149 --> 00:34:50,109

designing experiments it is we who are

487

00:34:58,620 --> 00:34:55,159

experiencing the world what we are doing

488

00:35:02,950 --> 00:34:58,630

in our science is representing the

489

00:35:06,430 --> 00:35:02,960

experiences of our experience and that

490

00:35:10,900 --> 00:35:06,440

also must be in our new model I'm gonna

491

00:35:15,510 --> 00:35:10,910

end very quickly here by reading you a

492

00:35:19,300 --> 00:35:15,520

couple of a concluding paragraphs from

493

00:35:23,380 --> 00:35:19,310

one or two of our publications that get

494

00:35:29,950 --> 00:35:23,390

to the point this book that's

495

00:35:34,780 --> 00:35:29,960

languishing outside on page 336 comes to

496

00:35:38,250 --> 00:35:34,790

the following position clearly the

497

00:35:43,050 --> 00:35:38,260

traditional array of causal

498

00:35:47,410 --> 00:35:43,060

reductionistic objective falsifiable

499

00:35:51,660 --> 00:35:47,420

tenets of the prevailing scientific

500

00:35:55,450 --> 00:35:51,670

we're gonna require extensive softening

501
00:35:57,550 --> 00:35:55,460
expansion and circumscription to allow

502
00:36:01,690 --> 00:35:57,560
to proceed profitably

503
00:36:05,230 --> 00:36:01,700
in this domain within his conviction

504
00:36:09,100 --> 00:36:05,240
silence of the subjective cannot be

505
00:36:13,510 --> 00:36:09,110
simply a cataloguing mantra it must

506
00:36:15,370 --> 00:36:13,520
become an endemic operational ethic that

507
00:36:19,210 --> 00:36:15,380
can incorporate familiar

508
00:36:23,010 --> 00:36:19,220
well-established phenomena along with

509
00:36:26,110 --> 00:36:23,020
always hear to regard it as anomalous

510
00:36:30,550 --> 00:36:26,120
what is required is the profound

511
00:36:32,920 --> 00:36:30,560
recognition that all of science as most

512
00:36:37,360 --> 00:36:32,930
properly defined in its rigorous

513
00:36:42,090 --> 00:36:37,370

empirical methodology as well as in its

514

00:36:45,880 --> 00:36:42,100

theoretical ruminations itself is

515

00:36:50,020 --> 00:36:45,890

inescapably an activity and product of

516

00:36:53,710 --> 00:36:50,030

the human mind and even there is only a

517

00:36:58,690 --> 00:36:53,720

particular leading discipline special

518

00:37:01,560 --> 00:36:58,700

case of the more basic experiencing and

519

00:37:05,440 --> 00:37:01,570

reasonable reasoning capabilities

520

00:37:08,820 --> 00:37:05,450

thereof it therefore follows that its

521

00:37:12,840 --> 00:37:08,830

entire expanded intellectual

522

00:37:17,620 --> 00:37:12,850

superstructure both observational and

523

00:37:21,990 --> 00:37:17,630

contemplative must reflect the influence

524

00:37:26,380 --> 00:37:22,000

of the individual and collective

525

00:37:31,120 --> 00:37:26,390

consciousness that contribute to its

526

00:37:34,540 --> 00:37:31,130

formation and its formalization the

527

00:37:38,700 --> 00:37:34,550

extent to which reality submits to the

528

00:37:42,100 --> 00:37:38,710

less broadly representational matrix of

529

00:37:44,560 --> 00:37:42,110

conventional science will depend on the

530

00:37:48,130 --> 00:37:44,570

particular topic the particular

531

00:37:52,230 --> 00:37:48,140

environment and the astuteness of the

532

00:37:55,060 --> 00:37:52,240

techniques much as the Newtonian

533

00:37:59,990 --> 00:37:55,070

scientific perspective was ultimately

534

00:38:04,430 --> 00:38:00,000

forced to yield to the generalizations

535

00:38:09,830 --> 00:38:04,440

of relativity and quantum mechanics

536

00:38:14,230 --> 00:38:09,840

so the inescapably subjective genesis of

537

00:38:17,270 --> 00:38:14,240

any expanded scientific logic and

538

00:38:23,080 --> 00:38:17,280

formalism must ultimately include

539

00:38:27,609 --> 00:38:23,090

evidence of that subjectivity within its

540

00:38:30,470 --> 00:38:27,619

representations of tangible experience

541

00:38:48,560 --> 00:38:30,480

thank you for your attention I'll try to

542

00:38:49,670 --> 00:38:48,570

answer any questions you might know

543

00:38:52,359 --> 00:38:49,680

thank you very much for that very

544

00:38:55,130 --> 00:38:52,369

fascinating presentation as always

545

00:38:58,490 --> 00:38:55,140

there's a podcast that's on the internet

546

00:39:01,190 --> 00:38:58,500

called brain science podcast by dr.

547

00:39:04,280 --> 00:39:01,200

ginger Campbell and she has various

548

00:39:07,490 --> 00:39:04,290

guests on one of her guests was Patricia

549

00:39:10,849 --> 00:39:07,500

Churchland a philosopher with

550

00:39:13,099 --> 00:39:10,859

orientation in neurophysiology and

551
00:39:15,440 --> 00:39:13,109
during their discussion the subject of

552
00:39:19,430 --> 00:39:15,450
qualia came up and Patricia Churchland

553
00:39:22,760 --> 00:39:19,440
said I don't know what qualia is and and

554
00:39:26,690 --> 00:39:22,770
and then ginger Campbell said I really

555
00:39:28,190 --> 00:39:26,700
don't know what it is either that is

556
00:39:28,640 --> 00:39:28,200
something I think that we talked about

557
00:39:31,040 --> 00:39:28,650
it

558
00:39:33,740 --> 00:39:31,050
reference to this science of this

559
00:39:43,740 --> 00:39:33,750
subjective how would you explain qualia

560
00:39:56,740 --> 00:39:47,410
but I suspect he would try to explain it

561
00:39:59,340 --> 00:39:56,750
to me it's obviously another term for

562
00:40:04,240 --> 00:39:59,350
what I was trying to say here today

563
00:40:08,980 --> 00:40:04,250

kaalia gets you into subjectivity qualia

564

00:40:14,620 --> 00:40:08,990

gets you into how good it feels how

565

00:40:20,140 --> 00:40:14,630

important it is how resonant you are all

566

00:40:25,120 --> 00:40:20,150

of the soft stuff qualia is a name it's

567

00:40:27,670 --> 00:40:25,130

what we're talking about in light of

568

00:40:29,320 --> 00:40:27,680

your comment about uncertainty being the

569

00:40:33,940 --> 00:40:29,330

raw material from which consciousness

570

00:40:36,220 --> 00:40:33,950

can construct new effects I'd appreciate

571

00:40:38,770 --> 00:40:36,230

it if you could comment how you can

572

00:40:41,560 --> 00:40:38,780

bring that perspective to for one

573

00:40:43,540 --> 00:40:41,570

example building stones mice experiments

574

00:40:45,840 --> 00:40:43,550

which we're probably all familiar with

575

00:40:48,610 --> 00:40:45,850

now from multiple publications in JSC

576

00:40:50,200 --> 00:40:48,620

there is absolutely no uncertainty in

577

00:40:53,380 --> 00:40:50,210

the destiny of those mice when they

578

00:40:56,440 --> 00:40:53,390

arrive from the repairing laboratory

579

00:41:01,090 --> 00:40:56,450

they will die of cancer in at most 28

580

00:41:03,100 --> 00:41:01,100

days period end of sentence Bill engages

581

00:41:05,260 --> 00:41:03,110

a mental procedure at a large number of

582

00:41:11,190 --> 00:41:05,270

them get better and live out normal

583

00:41:18,760 --> 00:41:14,530

intervened and taking advantage of some

584

00:41:21,460 --> 00:41:18,770

other factor some other mechanics that

585

00:41:24,760 --> 00:41:21,470

does have an intrinsic uncertainty about

586

00:41:27,480 --> 00:41:24,770

it by your own definition the fact that

587

00:41:31,830 --> 00:41:27,490

some a fraction of these mice survive

588

00:41:35,350 --> 00:41:31,840

means there was indeed a pertinent

589

00:41:38,100 --> 00:41:35,360

uncertainty in their fates the problem

590

00:41:41,950 --> 00:41:38,110

only was to find a handle on it and

591

00:41:46,210 --> 00:41:41,960

activate it I think we ought to let let

592

00:41:50,470 --> 00:41:46,220

Bill tell us what that handle is but

593

00:41:52,500 --> 00:41:50,480

there's nothing inconsistent with saying

594

00:41:55,980 --> 00:41:52,510

there is an uncertainty

595

00:41:58,410 --> 00:41:55,990

there is an essential uncertainty in any

596

00:42:00,840 --> 00:41:58,420

process and that is what you have to

597

00:42:04,940 --> 00:42:00,850

work on if you want to change sort of

598

00:42:10,230 --> 00:42:07,860

I'm Chuck leer Bob and I'd like to thank

599

00:42:12,240 --> 00:42:10,240

you on behalf of probably everybody here

600

00:42:16,740 --> 00:42:12,250

for your great contributions to our

601
00:42:19,590 --> 00:42:16,750
various fields what do you think are the

602
00:42:23,630 --> 00:42:19,600
chances that there is a conservation

603
00:42:28,530 --> 00:42:23,640
principle of information between

604
00:42:31,140 --> 00:42:28,540
physical entropy and conscious

605
00:42:38,130 --> 00:42:31,150
information trade-off one for one

606
00:42:41,430 --> 00:42:38,140
perhaps I'll bet you're about my bet you

607
00:42:45,800 --> 00:42:41,440
can invent it but you better remember

608
00:42:49,910 --> 00:42:45,810
when you get there that you invented it

609
00:42:57,210 --> 00:42:49,920
we know that the currency we call

610
00:43:00,270 --> 00:42:57,220
substance or matter is fungible with

611
00:43:03,600 --> 00:43:00,280
energy equals mc^2 and nothing

612
00:43:07,880 --> 00:43:03,610
else there are other examples we all

613
00:43:14,700 --> 00:43:07,890

know that the currency we call

614

00:43:22,490 --> 00:43:14,710

information is fungible with energy this

615

00:43:26,940 --> 00:43:22,500

is shannon wheeler shannon weaver

616

00:43:31,400 --> 00:43:26,950

business if nothing else there are

617

00:43:35,190 --> 00:43:31,410

recipes who are getting statistically

618

00:43:38,880 --> 00:43:35,200

thermodynamically from energy and

619

00:43:41,670 --> 00:43:38,890

information and back again I I'm sure

620

00:43:44,850 --> 00:43:41,680

there are conservation laws but bear in

621

00:43:47,820 --> 00:43:44,860

mind that they are products of the human

622

00:43:51,740 --> 00:43:47,830

mind as well and so they are going to

623

00:43:55,080 --> 00:43:51,750

come forward with a nomenclature with a

624

00:43:58,200 --> 00:43:55,090

conceptualization that is going to tell

625

00:44:03,480 --> 00:43:58,210

you at least as much about consciousness

626

00:44:05,049 --> 00:44:03,490

as it is about something ontological e

627

00:44:08,189 --> 00:44:05,059

fundamental

628

00:44:12,939 --> 00:44:08,199

in the issue of the fungibility of

629

00:44:14,780 --> 00:44:12,949

energy and information let's give

630

00:44:18,410 --> 00:44:14,790

another round of thanks