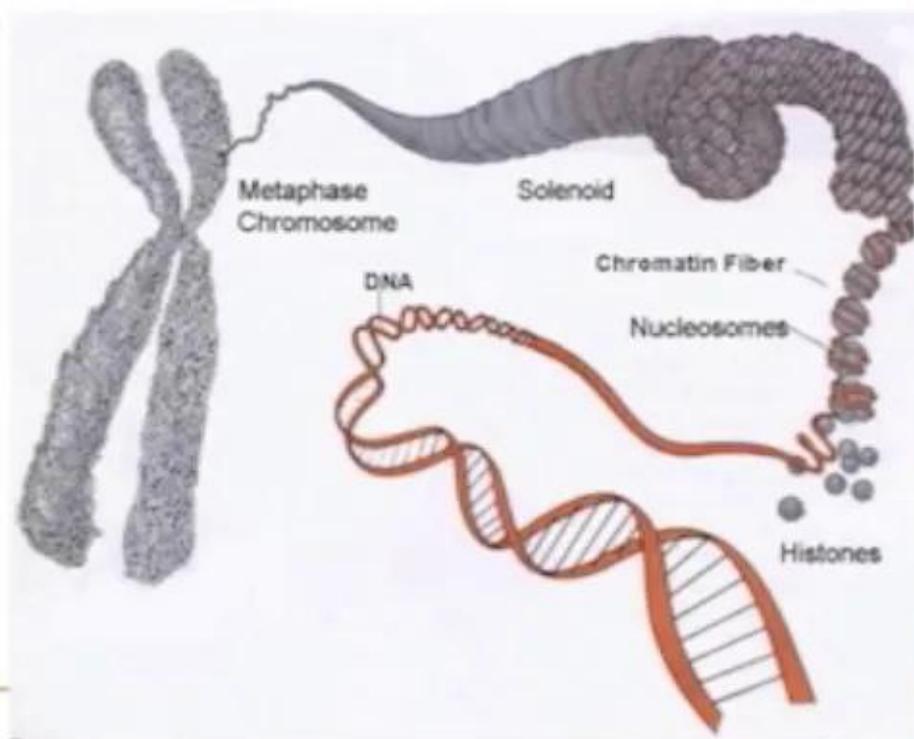


## The Epigenome

- Internal and external environments shape each other
  - The epigenome regulates DNA expression<sup>4</sup>
    - DNA methylation;
    - Chromatin;
    - Histone proteins;
    - non-coding RNA;
  - Each influences the others.



1  
00:00:04,370 --> 00:00:02,929  
hi nice to be among you all it's

2  
00:00:06,769 --> 00:00:04,380  
interesting that so many of you I've

3  
00:00:09,910 --> 00:00:06,779  
already dealt with this topic in your

4  
00:00:12,650 --> 00:00:09,920  
own ways and I'm going to take a

5  
00:00:15,169 --> 00:00:12,660  
slightly different approach to the

6  
00:00:17,650 --> 00:00:15,179  
bureaucratic mind relating into the

7  
00:00:22,099 --> 00:00:17,660  
potential effects negative effects on

8  
00:00:23,779 --> 00:00:22,109  
physiologic health and so our Institute

9  
00:00:25,490 --> 00:00:23,789  
the Institute for therapeutic discovery

10  
00:00:27,500 --> 00:00:25,500  
we're in Richmond Virginia plus Albany

11  
00:00:29,150 --> 00:00:27,510  
New York with John McMichael we're

12  
00:00:31,400 --> 00:00:29,160  
interested in such things as energy

13  
00:00:35,120 --> 00:00:31,410

medicine the Bankston healing project

14  
00:00:36,560 --> 00:00:35,130  
and the placebo response now when we're

15  
00:00:38,500 --> 00:00:36,570  
talking about the bureaucratic mind

16  
00:00:43,670 --> 00:00:38,510  
we're talking about pervasive

17  
00:00:46,250 --> 00:00:43,680  
connections throughout daily life it is

18  
00:00:48,310 --> 00:00:46,260  
defined here as a dynamic speaking to

19  
00:00:53,260 --> 00:00:48,320  
allow the organized perception and

20  
00:00:55,850 --> 00:00:53,270  
subsequently behave and so if we try to

21  
00:00:58,220 --> 00:00:55,860  
its characterized by status quo of

22  
00:01:02,689 --> 00:00:58,230  
stereotypical points of view condensed

23  
00:01:04,189 --> 00:01:02,699  
the thinking it's hard to get a metric

24  
00:01:06,590 --> 00:01:04,199  
on this or like even if it's a

25  
00:01:08,810 --> 00:01:06,600  
questionnaire because by designing that

26  
00:01:11,120 --> 00:01:08,820  
questionnaire by posing those problems

27  
00:01:13,609 --> 00:01:11,130  
of with a profile you're seeking to

28  
00:01:15,620 --> 00:01:13,619  
elicit you're actually defining the

29  
00:01:17,929 --> 00:01:15,630  
bureaucratic mind and so you're

30  
00:01:27,050 --> 00:01:17,939  
producing a bureaucratic situation and

31  
00:01:29,749 --> 00:01:27,060  
so you've obviously made about education

32  
00:01:34,609 --> 00:01:29,759  
and education of all kinds and it's

33  
00:01:36,140 --> 00:01:34,619  
upheld by authority of all kinds and so

34  
00:01:39,830 --> 00:01:36,150  
we'll get into the universal fallacies

35  
00:01:41,390 --> 00:01:39,840  
of logic in just a little bit so the

36  
00:01:44,179 --> 00:01:41,400  
characteristics of maintenance of a

37  
00:01:46,190 --> 00:01:44,189  
prefabricated mindset for the sole

38  
00:01:49,010 --> 00:01:46,200

purpose of maintaining that specific

39

00:01:51,440 --> 00:01:49,020

mindset so it's rather in sexual

40

00:01:53,719 --> 00:01:51,450

incestuous in that regard and it

41

00:01:58,310 --> 00:01:53,729

excludes categorical thinking and

42

00:02:00,889 --> 00:01:58,320

categorical behavior and those branch

43

00:02:03,859 --> 00:02:00,899

all disciplines for example in politics

44

00:02:04,550 --> 00:02:03,869

global warming does not occur that's one

45

00:02:07,219 --> 00:02:04,560

example

46

00:02:10,040 --> 00:02:07,229

and philosophy of material based world

47

00:02:13,790 --> 00:02:10,050

is projected on to materialism

48

00:02:16,699 --> 00:02:13,800

definition of the philosophy in science

49

00:02:18,890 --> 00:02:16,709

the findings of science aren't used

50

00:02:22,040 --> 00:02:18,900

they're used to form a bureaucratic

51  
00:02:26,570 --> 00:02:22,050  
mindset rather than to advance science

52  
00:02:29,000 --> 00:02:26,580  
itself as a methodology of learning and

53  
00:02:31,940 --> 00:02:29,010  
in the corporate the free-market rules

54  
00:02:33,259 --> 00:02:31,950  
and in religion evolution does not occur

55  
00:02:35,650 --> 00:02:33,269  
and in fairness

56  
00:02:37,880 --> 00:02:35,660  
one might say another bureaucratic

57  
00:02:40,550 --> 00:02:37,890  
consideration would be saying that

58  
00:02:43,550 --> 00:02:40,560  
intelligent design is a bunch of hogwash

59  
00:02:45,050 --> 00:02:43,560  
so there's a flip and one could make the

60  
00:02:47,180 --> 00:02:45,060  
point that each and every one of these

61  
00:02:49,400 --> 00:02:47,190  
characteristics is political by nature

62  
00:02:51,289 --> 00:02:49,410  
because it involves humans coming

63  
00:02:54,050 --> 00:02:51,299

together and struggling among themselves

64

00:02:56,589 --> 00:02:54,060

to see which point of view will arrive

65

00:02:59,900 --> 00:02:56,599

at a consensual agreement and that

66

00:03:01,460 --> 00:02:59,910

consensus is a hallmark of what we're

67

00:03:05,199 --> 00:03:01,470

dealing with here today as the

68

00:03:08,000 --> 00:03:05,209

bureaucratic mind now it has benefits

69

00:03:11,449 --> 00:03:08,010

societies institutions organizations are

70

00:03:12,890 --> 00:03:11,459

built on bureaucracy so I'm not trying

71

00:03:14,180 --> 00:03:12,900

to throw anything out the window here

72

00:03:17,090 --> 00:03:14,190

I'm just trying to gain an understanding

73

00:03:20,330 --> 00:03:17,100

and appreciation of the entire dynamic

74

00:03:23,809 --> 00:03:20,340

and so you have order purpose and

75

00:03:26,990 --> 00:03:23,819

meaning a worldview provides a world to

76  
00:03:29,479 --> 00:03:27,000  
view and then they give you a nation of

77  
00:03:32,240 --> 00:03:29,489  
laws that prevent anarchy and chaos

78  
00:03:35,330 --> 00:03:32,250  
there's no Mad Max scenario if you have

79  
00:03:37,099 --> 00:03:35,340  
a coherent society it gives you certain

80  
00:03:39,349 --> 00:03:37,109  
standards so no matter where in the

81  
00:03:40,729 --> 00:03:39,359  
world that you buy a music CD you're

82  
00:03:44,990 --> 00:03:40,739  
going to be able to go home and play

83  
00:03:46,069 --> 00:03:45,000  
that music CD and whatever technology

84  
00:03:48,920 --> 00:03:46,079  
you have at home

85  
00:03:50,660 --> 00:03:48,930  
the airline safety regulations and if

86  
00:03:53,390 --> 00:03:50,670  
you're on the road and you let's just

87  
00:03:54,979 --> 00:03:53,400  
say your favorite restaurant of your

88  
00:03:56,809 --> 00:03:54,989

favorite restaurants at home is Ruby

89

00:03:58,910 --> 00:03:56,819

Tuesday's and you're

90

00:04:01,099 --> 00:03:58,920

3,000 miles away and there's a Ruby

91

00:04:03,500 --> 00:04:01,109

Tuesday the odds are you're going to get

92

00:04:04,040 --> 00:04:03,510

a meal that you can pretty much enjoy

93

00:04:05,420 --> 00:04:04,050

because

94

00:04:07,760 --> 00:04:05,430

going to be comparable to the one at

95

00:04:10,220 --> 00:04:07,770

home so bureaucracy gives us all those

96

00:04:13,280 --> 00:04:10,230

things it gives us the logistics to hold

97

00:04:15,920 --> 00:04:13,290

a conference both on a general level and

98

00:04:18,530 --> 00:04:15,930

for the individual getting here the

99

00:04:20,720 --> 00:04:18,540

drawbacks philosophical conditioning

100

00:04:23,900 --> 00:04:20,730

thinking is held as the final reality

101  
00:04:26,810 --> 00:04:23,910  
and so you're again you're going to try

102  
00:04:29,210 --> 00:04:26,820  
to maintain that mindset and squash any

103  
00:04:32,180 --> 00:04:29,220  
of the opposition trying to change that

104  
00:04:34,460 --> 00:04:32,190  
particular mindset the fallacies of

105  
00:04:36,650 --> 00:04:34,470  
logic are universal that violates

106  
00:04:38,750 --> 00:04:36,660  
Universal fallacies of logic two of them

107  
00:04:40,520 --> 00:04:38,760  
being like say the bandwagon effect you

108  
00:04:42,020 --> 00:04:40,530  
say something is true just because

109  
00:04:43,580 --> 00:04:42,030  
everybody in your discipline or

110  
00:04:46,520 --> 00:04:43,590  
everybody in your circle of influence

111  
00:04:49,310 --> 00:04:46,530  
says it's true and in terms of authority

112  
00:04:51,350 --> 00:04:49,320  
if a medical doctor says something or if

113  
00:04:53,060 --> 00:04:51,360

a professor says something or an

114

00:04:55,430 --> 00:04:53,070

educator says something then that is

115

00:04:58,250 --> 00:04:55,440

true because that person that authority

116

00:05:00,560 --> 00:04:58,260

figure said it was true and it's held is

117

00:05:02,950 --> 00:05:00,570

true that's a violation of universal

118

00:05:07,280 --> 00:05:02,960

that's the universal fallacy of logic

119

00:05:09,800 --> 00:05:07,290

now we get in the legal morass that

120

00:05:13,159 --> 00:05:09,810

influences everything a will so position

121

00:05:16,220 --> 00:05:13,169

is more physicians are becoming more

122

00:05:18,500 --> 00:05:16,230

concerned about being sued rather than

123

00:05:20,990 --> 00:05:18,510

the practice the art and practice the

124

00:05:22,700 --> 00:05:21,000

art and craft of their practice and so

125

00:05:24,710 --> 00:05:22,710

they will prescribe they will over

126  
00:05:26,810 --> 00:05:24,720  
prescribe they'll do anything to remove

127  
00:05:28,520 --> 00:05:26,820  
any hint of litigation and I'm not

128  
00:05:30,560 --> 00:05:28,530  
saying every physician has it so I'm

129  
00:05:33,200 --> 00:05:30,570  
just trying to get some principles

130  
00:05:35,690 --> 00:05:33,210  
established and so in public education

131  
00:05:38,480 --> 00:05:35,700  
the curriculum is decided by

132  
00:05:41,390 --> 00:05:38,490  
governmental bodies that have their own

133  
00:05:44,360 --> 00:05:41,400  
set of rules regulations and laws all

134  
00:05:47,630 --> 00:05:44,370  
that comes together to form a coherent

135  
00:05:49,460 --> 00:05:47,640  
mindset but that coherent mindset

136  
00:05:52,040 --> 00:05:49,470  
typically goes unchallenged for a period

137  
00:05:54,530 --> 00:05:52,050  
of time its deferred to as its own

138  
00:05:56,630 --> 00:05:54,540

authority it has its own life that tries

139

00:06:01,660 --> 00:05:56,640

to maintain itself and so upon

140

00:06:07,790 --> 00:06:05,570

now the causes it's a natural this is

141

00:06:10,370 --> 00:06:07,800

the natural effect of psychological

142

00:06:12,530 --> 00:06:10,380

closure so for example if you take a

143

00:06:15,170 --> 00:06:12,540

paragraph out of your favorite book and

144

00:06:18,350 --> 00:06:15,180

you Olympic you white out one word and

145

00:06:19,930 --> 00:06:18,360

you read that odds are most people are

146

00:06:22,610 --> 00:06:19,940

going to fill in that blank space

147

00:06:25,280 --> 00:06:22,620

they're not going to see the blank spot

148

00:06:28,280 --> 00:06:25,290

there it's a natural property and it's a

149

00:06:31,790 --> 00:06:28,290

universal and what it does is it

150

00:06:33,560 --> 00:06:31,800

constricts awareness survival membership

151  
00:06:35,750 --> 00:06:33,570  
and belonging I'm a personal fan of mild

152  
00:06:38,090 --> 00:06:35,760  
Maslow's hierarchy of needs refer to it

153  
00:06:40,280 --> 00:06:38,100  
constantly so in the deficit needs you

154  
00:06:42,680 --> 00:06:40,290  
have things such as survival you need to

155  
00:06:44,960 --> 00:06:42,690  
eat you need to find shelter there's a

156  
00:06:47,240 --> 00:06:44,970  
sense of belongingness that's part of

157  
00:06:48,860 --> 00:06:47,250  
the deficit needs now it's not when you

158  
00:06:50,990 --> 00:06:48,870  
get into your growth needs it's not that

159  
00:06:52,970 --> 00:06:51,000  
you get rid of your deficit needs you

160  
00:06:55,580 --> 00:06:52,980  
need to continue to eat most people do

161  
00:06:59,870 --> 00:06:55,590  
anyway the ideas you can suspend that

162  
00:07:02,540 --> 00:06:59,880  
drive to fulfill those needs in favor of

163  
00:07:04,490 --> 00:07:02,550

growth advanced learning and a

164

00:07:07,220 --> 00:07:04,500

completely new sense of the word of the

165

00:07:10,250 --> 00:07:07,230

world and what's really interesting is

166

00:07:12,980 --> 00:07:10,260

Maslow gets into an ontological state of

167

00:07:15,350 --> 00:07:12,990

consciousness defined as being there's

168

00:07:17,060 --> 00:07:15,360

many different terms for ontology here

169

00:07:22,670 --> 00:07:17,070

I'm going to approach it as a state of

170

00:07:25,370 --> 00:07:22,680

beingness which is inherently beyond the

171

00:07:28,130 --> 00:07:25,380

bureaucratic mind because it does not

172

00:07:32,860 --> 00:07:28,140

support any other mindset it supports

173

00:07:37,460 --> 00:07:35,840

bureaucratic mind hinders individuation

174

00:07:39,350 --> 00:07:37,470

which is this process of going through

175

00:07:42,260 --> 00:07:39,360

deficit the growth needs that Maslow

176

00:07:45,290 --> 00:07:42,270

outlines the interesting thing about the

177

00:07:47,090 --> 00:07:45,300

individuated person is that individuated

178

00:07:49,640 --> 00:07:47,100

person is fully functional within

179

00:07:52,040 --> 00:07:49,650

society they do not become an outcast

180

00:07:54,590 --> 00:07:52,050

you know they do not position themselves

181

00:07:57,200 --> 00:07:54,600

above the crowd they are fully

182

00:07:59,600 --> 00:07:57,210

integrated but they have their own sense

183

00:08:01,640 --> 00:07:59,610

of where they are their own sense of

184

00:08:04,520 --> 00:08:01,650

purpose of meaning their own direction

185

00:08:06,980 --> 00:08:04,530

in life and they figure out a way to

186

00:08:10,090 --> 00:08:06,990

make that of value to society at large

187

00:08:12,740 --> 00:08:10,100

so it's a really interesting dynamic

188

00:08:13,390 --> 00:08:12,750

another one person write our article

189

00:08:15,460 --> 00:08:13,400

Arjun

190

00:08:18,070 --> 00:08:15,470

I read he makes the point we have simply

191

00:08:21,689 --> 00:08:18,080

become habituated to bureaucratic life

192

00:08:25,120 --> 00:08:21,699

and that's the way it is and nobody

193

00:08:29,290 --> 00:08:25,130

overstatement challenges it and so we're

194

00:08:32,469 --> 00:08:29,300

caught in a vise now here's the

195

00:08:36,159 --> 00:08:32,479

suggestion and overly conditioned

196

00:08:39,550 --> 00:08:36,169

mindset produces undue stress and that

197

00:08:42,519 --> 00:08:39,560

constriction renders homeo dynamics out

198

00:08:45,070 --> 00:08:42,529

of whack so from a being perspective and

199

00:08:47,320 --> 00:08:45,080

ontological perspective being is a

200

00:08:49,540 --> 00:08:47,330

psychological state of homie on Emma's

201  
00:08:53,769 --> 00:08:49,550  
homeo dynamics being another more

202  
00:08:56,949 --> 00:08:53,779  
descriptive word of homeostasis and so

203  
00:08:59,530 --> 00:08:56,959  
if the body is fully functioning it is

204  
00:09:02,110 --> 00:08:59,540  
in a state of being physiologic homeo

205  
00:09:05,380 --> 00:09:02,120  
dynamics correlates with psychological

206  
00:09:08,680 --> 00:09:05,390  
homeo dynamics so homie I don't dynamics

207  
00:09:11,460 --> 00:09:08,690  
defined is a natural state evidenced by

208  
00:09:14,470 --> 00:09:11,470  
health psychological and physiological

209  
00:09:16,449 --> 00:09:14,480  
it is a complex it's dynamic it has

210  
00:09:19,000 --> 00:09:16,459  
multiple feedback systems an array of

211  
00:09:22,180 --> 00:09:19,010  
feedback systems that maintain that

212  
00:09:24,910 --> 00:09:22,190  
really intricate dance of balance it's a

213  
00:09:27,940 --> 00:09:24,920

complexity based equilibrium so even

214

00:09:29,949 --> 00:09:27,950

though given its complex nature when

215

00:09:32,829 --> 00:09:29,959

you're talking about a complexity you're

216

00:09:35,230 --> 00:09:32,839

talking about different systems talking

217

00:09:37,960 --> 00:09:35,240

and dancing among each others so that

218

00:09:40,329 --> 00:09:37,970

complex arrangement goes into a state of

219

00:09:42,970 --> 00:09:40,339

complexity where all these feedback

220

00:09:44,470 --> 00:09:42,980

systems the regulatory systems they

221

00:09:46,360 --> 00:09:44,480

communicate to one another do they

222

00:09:50,199 --> 00:09:46,370

bounce off one another and the end

223

00:09:54,730 --> 00:09:50,209

result is physiologic equilibrium that's

224

00:09:56,440 --> 00:09:54,740

always never in a state of rest so now

225

00:09:58,269 --> 00:09:56,450

to tackle that let's talk a little bit

226

00:10:02,350 --> 00:09:58,279

about the epigenome epigenomic

227

00:10:04,570 --> 00:10:02,360

researchers who relatively new it deals

228

00:10:07,750 --> 00:10:04,580

with these pieces surrounding and

229

00:10:10,150 --> 00:10:07,760

influencing DNA the aspects of them are

230

00:10:13,150 --> 00:10:10,160

DNA methylation which is carbon groups

231

00:10:15,100 --> 00:10:13,160

attaching directly to DNA histone

232

00:10:17,800 --> 00:10:15,110

proteins and I'll give you a graphic of

233

00:10:19,260 --> 00:10:17,810

that in just a second chromatin which is

234

00:10:23,010 --> 00:10:19,270

like condensed has

235

00:10:25,470 --> 00:10:23,020

proteins and non-coding RNA non-coding

236

00:10:28,320 --> 00:10:25,480

RNA is probably the least investigated

237

00:10:29,700 --> 00:10:28,330

to date and so and it's I don't even

238

00:10:34,800 --> 00:10:29,710

want to go there because I'm going to

239

00:10:36,630 --> 00:10:34,810

say something wrong now each of these

240

00:10:40,830 --> 00:10:36,640

influences the others and here's a

241

00:10:43,020 --> 00:10:40,840

general view of it so you go from DNA

242

00:10:46,260 --> 00:10:43,030

I'll give you an image on methylation in

243

00:10:47,640 --> 00:10:46,270

a second histones form and they get

244

00:10:50,010 --> 00:10:47,650

tighter and tighter and tighter until

245

00:10:51,660 --> 00:10:50,020

they form chromatin structures they get

246

00:10:54,030 --> 00:10:51,670

tighter and tighter and tighter it's a

247

00:10:56,550 --> 00:10:54,040

productive previously thought to be a

248

00:10:58,770 --> 00:10:56,560

protective influence of DNA to form the

249

00:11:00,300 --> 00:10:58,780

chromosomes again they're over here you

250

00:11:03,980 --> 00:11:00,310

go through the sequence of histone

251  
00:11:07,320 --> 00:11:03,990  
proteins condensing from a chromatin and

252  
00:11:09,870 --> 00:11:07,330  
protects the chromosome that thinking

253  
00:11:12,930 --> 00:11:09,880  
and the idea that DNA is mechanistic

254  
00:11:15,000 --> 00:11:12,940  
that is the structure of DNA the coding

255  
00:11:16,620 --> 00:11:15,010  
of DNA produces the proteins and

256  
00:11:18,300 --> 00:11:16,630  
produces everything about you that

257  
00:11:21,270 --> 00:11:18,310  
thinking is going out the window

258  
00:11:25,200 --> 00:11:21,280  
quite rapidly the idea being that to

259  
00:11:32,430 --> 00:11:25,210  
SEPA genome Music's of the proteins

260  
00:11:36,450 --> 00:11:32,440  
there's eight different kinds of histone

261  
00:11:38,970 --> 00:11:36,460  
molecules they form a nucleus ohm this

262  
00:11:41,640 --> 00:11:38,980  
is an image of the DNA wrapping in and

263  
00:11:43,740 --> 00:11:41,650

around it it also has histone tails of

264

00:11:47,130 --> 00:11:43,750

which nobody knows too much about those

265

00:11:48,810 --> 00:11:47,140

yet they are made up of the same type of

266

00:11:50,400 --> 00:11:48,820

protein but there are different sizes my

267

00:11:55,590 --> 00:11:50,410

conjecture is that they serve as

268

00:11:57,240 --> 00:11:55,600

antennas antennae excuse me and so they

269

00:12:02,030 --> 00:11:57,250

form they get tighter and tighter and

270

00:12:04,560 --> 00:12:02,040

they form chromatin structure and the

271

00:12:06,870 --> 00:12:04,570

chromatin has its own form of histone

272

00:12:10,920 --> 00:12:06,880

methylation all these influences all

273

00:12:13,620 --> 00:12:10,930

driven by enzymes there's at an

274

00:12:18,000 --> 00:12:13,630

embryonic level the methylation for

275

00:12:20,580 --> 00:12:18,010

example is completely stripped it's d

276

00:12:23,190 --> 00:12:20,590

methylated and then it's remap elated

277

00:12:25,590 --> 00:12:23,200

for cell differentiation a little bit

278

00:12:29,430 --> 00:12:25,600

later methylation is completely stripped

279

00:12:30,660 --> 00:12:29,440

again it's remember differentiation and

280

00:12:33,720 --> 00:12:30,670

it's always at the CG

281

00:12:35,520 --> 00:12:33,730

basse the interesting thing about it is

282

00:12:37,320 --> 00:12:35,530

they know now DNA methylation is the

283

00:12:40,470 --> 00:12:37,330

best characterized part of the the

284

00:12:43,050 --> 00:12:40,480

epigenome today it's responsible for

285

00:12:46,320 --> 00:12:43,060

cellular memory processes and it's

286

00:12:47,940 --> 00:12:46,330

heritable and so one of the interesting

287

00:12:49,800 --> 00:12:47,950

things about it is that they've tracked

288

00:12:51,600 --> 00:12:49,810

it down to the f5 generation now they

289

00:12:58,890 --> 00:12:51,610

know it's gone at least five generations

290

00:13:01,890 --> 00:12:58,900

now environmental toxins produce epi

291

00:13:03,900 --> 00:13:01,900

mutations and so this is an example of

292

00:13:07,920 --> 00:13:03,910

an epi mutation down here it's just an

293

00:13:13,710 --> 00:13:07,930

irregular form on the pattern of DNA

294

00:13:16,260 --> 00:13:13,720

methylation island and that aberration

295

00:13:19,290 --> 00:13:16,270

influences genetic expression the

296

00:13:20,610 --> 00:13:19,300

expression of DNA so all of these work

297

00:13:23,490 --> 00:13:20,620

together and they form the entire

298

00:13:26,750 --> 00:13:23,500

epigenome forms a regulatory influence

299

00:13:31,200 --> 00:13:26,760

of what the DNA will be expressed

300

00:13:34,860 --> 00:13:31,210

without altering DNA structure and so

301  
00:13:39,150 --> 00:13:34,870  
it's turning everything on it's here and

302  
00:13:41,640 --> 00:13:39,160  
research in this regard so it just turns

303  
00:13:44,400 --> 00:13:41,650  
off the wrong genes turns on this and

304  
00:13:48,060 --> 00:13:44,410  
that it's attributed to cancer obesity

305  
00:13:51,060 --> 00:13:48,070  
for example a person can be morbidly

306  
00:13:52,770 --> 00:13:51,070  
obese diet and exercise won't do a darn

307  
00:13:54,450 --> 00:13:52,780  
thing and the reason that person knows

308  
00:13:58,130 --> 00:13:54,460  
beasts is because they have an aberrant

309  
00:14:00,450 --> 00:13:58,140  
methylation pattern plain and simple

310  
00:14:03,660 --> 00:14:00,460  
one researcher I talked to who

311  
00:14:05,850 --> 00:14:03,670  
attributes all diseases except we're not

312  
00:14:08,040 --> 00:14:05,860  
except for injury related diseases and

313  
00:14:10,080 --> 00:14:08,050

infectious diseases attributes all other

314

00:14:15,390 --> 00:14:10,090

diseases to aberrant and methylation or

315

00:14:18,600 --> 00:14:15,400

epigenomic aberrations now here in terms

316

00:14:22,200 --> 00:14:18,610

of this talk the evidence indicates that

317

00:14:25,230 --> 00:14:22,210

psychosocial conditions can produce the

318

00:14:27,150 --> 00:14:25,240

stress that acts in the same way as an

319

00:14:29,190 --> 00:14:27,160

environmental toxin like an

320

00:14:31,950 --> 00:14:29,200

environmental poison exhaust fumes

321

00:14:33,900 --> 00:14:31,960

produce rapid changes in methylation

322

00:14:35,520 --> 00:14:33,910

patterns and so we're not talking about

323

00:14:38,700 --> 00:14:35,530

the occasional fight we're talking about

324

00:14:41,140 --> 00:14:38,710

a person being in a stressful ongoing

325

00:14:48,910 --> 00:14:41,150

situation that could produce an

326

00:14:51,250 --> 00:14:48,920

mutation which will affect health now

327

00:14:52,960 --> 00:14:51,260

let's shift gears and come at it from

328

00:14:54,640 --> 00:14:52,970

slightly different angles using the same

329

00:14:57,010 --> 00:14:54,650

thing a mindset affecting health and

330

00:14:59,380 --> 00:14:57,020

we'll go into placebo response defined

331

00:15:01,390 --> 00:14:59,390

is a psychological component delivering

332

00:15:04,270 --> 00:15:01,400

a therapeutic effect beyond natural

333

00:15:08,530 --> 00:15:04,280

history and spontaneous regression it is

334

00:15:11,050 --> 00:15:08,540

a restoration of homeo dynamics it's the

335

00:15:13,660 --> 00:15:11,060

same dynamics pertain to nocebo response

336

00:15:17,230 --> 00:15:13,670

where all these some condition produces

337

00:15:21,280 --> 00:15:17,240

a state of ill health or a state of

338

00:15:25,450 --> 00:15:21,290

disease recibo are no responses stem

339

00:15:28,720 --> 00:15:25,460

from active psychosocial processes such

340

00:15:30,940 --> 00:15:28,730

as conditioning and expectation some

341

00:15:32,830 --> 00:15:30,950

form of learning and education goes into

342

00:15:35,290 --> 00:15:32,840

producing those states of expectancy of

343

00:15:37,570 --> 00:15:35,300

those states of conditioning and there

344

00:15:39,160 --> 00:15:37,580

as well as being mediated by so

345

00:15:41,620 --> 00:15:39,170

psychosocial conditions they're

346

00:15:45,250 --> 00:15:41,630

modulated by states of learning and

347

00:15:46,960 --> 00:15:45,260

education and so it's affects the

348

00:15:49,240 --> 00:15:46,970

internal and external environments where

349

00:15:51,040 --> 00:15:49,250

there's psychological conditions and

350

00:15:53,530 --> 00:15:51,050

there could be the plaques on the wall

351  
00:15:55,540 --> 00:15:53,540  
which brings us back to Authority so if

352  
00:15:57,460 --> 00:15:55,550  
you're in a doctor's office and they're

353  
00:15:59,260 --> 00:15:57,470  
getting more adept on employing the

354  
00:16:01,570 --> 00:15:59,270  
placebo response as a mode of therapy

355  
00:16:03,790 --> 00:16:01,580  
now the plaques on the wall could very

356  
00:16:06,640 --> 00:16:03,800  
well support and help that position

357  
00:16:09,190 --> 00:16:06,650  
bring his authority his or her authority

358  
00:16:15,520 --> 00:16:09,200  
to bear to Plews the seat up receiver

359  
00:16:17,620 --> 00:16:15,530  
response now they form strong social and

360  
00:16:19,870 --> 00:16:17,630  
individual stereotypes again that's a

361  
00:16:20,860 --> 00:16:19,880  
hallmark of how we're characterizing the

362  
00:16:23,680 --> 00:16:20,870  
bureaucratic mind

363  
00:16:25,210 --> 00:16:23,690

for example prozac is more effective in

364

00:16:27,490 --> 00:16:25,220

the United States than in Western Europe

365

00:16:29,320 --> 00:16:27,500

and volume is better in France and

366

00:16:32,650 --> 00:16:29,330

Belgium in the US and here's where it

367

00:16:35,470 --> 00:16:32,660

gets fun blue pills are better than red

368

00:16:38,470 --> 00:16:35,480

pills for tranquilizers placebo type

369

00:16:40,420 --> 00:16:38,480

pills except for in Italian men who

370

00:16:42,610 --> 00:16:40,430

associate blue with the national soccer

371

00:16:47,140 --> 00:16:42,620

team so it kind of revs them up a little

372

00:16:49,480 --> 00:16:47,150

bit now what's really interesting big

373

00:16:51,850 --> 00:16:49,490

farmers really got wind of this they're

374

00:16:52,790 --> 00:16:51,860

studying it quite hard and all of this

375

00:16:54,889 --> 00:16:52,800

goes in

376

00:16:57,410 --> 00:16:54,899

the geography of clinical trials

377

00:17:07,600 --> 00:16:57,420

selection to enhance the success rate of

378

00:17:11,809 --> 00:17:09,949

so mine meaning in the violent the

379

00:17:14,509 --> 00:17:11,819

pre-brew the placebo response has been

380

00:17:16,490 --> 00:17:14,519

turned to meaning response meaning is

381

00:17:18,919 --> 00:17:16,500

learned I tend to look at the placebo

382

00:17:22,279 --> 00:17:18,929

response as a learned response and

383

00:17:24,110 --> 00:17:22,289

meaning being part of that but if you

384

00:17:26,059 --> 00:17:24,120

remember that search your meaning it's

385

00:17:28,429 --> 00:17:26,069

not only part of the bureaucratic

386

00:17:32,960 --> 00:17:28,439

mindset it's also part of Maslow's

387

00:17:34,580 --> 00:17:32,970

hierarchy so the placebo response has

388

00:17:37,389 --> 00:17:34,590

now been validated by science and

389

00:17:39,799 --> 00:17:37,399

mainstream literature what's happening

390

00:17:41,600 --> 00:17:39,809

more people are becoming aware of it

391

00:17:43,669 --> 00:17:41,610

more people who begin educating to it

392

00:17:46,369 --> 00:17:43,679

enrolling that in a trial has an

393

00:17:48,320 --> 00:17:46,379

automatic effect if you think if the

394

00:17:50,450 --> 00:17:48,330

trial subject thinks they are in the

395

00:17:54,980 --> 00:17:50,460

placebo group they are going to have a

396

00:17:56,690 --> 00:17:54,990

better response while taking placebo the

397

00:18:00,409 --> 00:17:56,700

placebo response and trials is

398

00:18:02,570 --> 00:18:00,419

increasing and what is really

399

00:18:06,019 --> 00:18:02,580

interesting is that even if you're being

400

00:18:07,299 --> 00:18:06,029

told you're given placebo it doesn't

401  
00:18:09,769 --> 00:18:07,309  
matter you're going to respond

402  
00:18:12,350 --> 00:18:09,779  
therapeutically to being told you're

403  
00:18:15,350 --> 00:18:12,360  
only being given placebo because people

404  
00:18:16,820 --> 00:18:15,360  
know of the power behind placebo now so

405  
00:18:19,970 --> 00:18:16,830  
we get into the problem of metrics that

406  
00:18:22,549 --> 00:18:19,980  
we talked about briefly it's like an

407  
00:18:26,389 --> 00:18:22,559  
it's a frontier field in terms of Bill

408  
00:18:29,090 --> 00:18:26,399  
bangtan's project the idea it might

409  
00:18:30,950 --> 00:18:29,100  
produce an avenue of inquiry examine a

410  
00:18:33,350 --> 00:18:30,960  
psychological posture his for the

411  
00:18:35,330 --> 00:18:33,360  
healers posture in relation to in turn

412  
00:18:38,460 --> 00:18:35,340  
intentionality and how these parlay into

413  
00:18:41,070 --> 00:18:38,470

healing so the our Institute is then

414

00:18:42,899 --> 00:18:41,080

our b-tree labs with John McMichael

415

00:18:45,810 --> 00:18:42,909

addressed yesterday is approaching the

416

00:18:47,970 --> 00:18:45,820

problem of the ax bioenergy and so

417

00:18:49,799 --> 00:18:47,980

personally I know this is we're all in

418

00:18:52,289 --> 00:18:49,809

this one is I think Bill enters a

419

00:18:54,990 --> 00:18:52,299

meditative state we've already dealt

420

00:18:58,470 --> 00:18:55,000

with that he emits depending upon how

421

00:19:00,390 --> 00:18:58,480

you model it he emits a homeo dynamic

422

00:19:02,850 --> 00:19:00,400

signal that produces the healing court

423

00:19:05,279 --> 00:19:02,860

his consciousness and a psychological

424

00:19:08,970 --> 00:19:05,289

homeo dynamic state is read by the

425

00:19:11,279 --> 00:19:08,980

Healey self-selects what is required out

426  
00:19:13,710 --> 00:19:11,289  
of that broadband signal and the healing

427  
00:19:15,899 --> 00:19:13,720  
occurs so that brings us into modeling

428  
00:19:17,730 --> 00:19:15,909  
which is an effect of the bureaucratic

429  
00:19:20,730 --> 00:19:17,740  
mind and produces the bureaucratic money

430  
00:19:23,610 --> 00:19:20,740  
and given that I have 30 seconds left

431  
00:19:24,680 --> 00:19:23,620  
we'll end it there so it ends I'd like

432  
00:19:30,160 --> 00:19:24,690  
to contribute

433  
00:19:32,510 --> 00:19:30,170  
[Applause]

434  
00:19:34,870 --> 00:19:32,520  
thank you ken you ended it definitely

435  
00:19:39,380 --> 00:19:34,880  
early so we'll bring some people up

436  
00:19:41,810 --> 00:19:39,390  
Julie really really interesting thank

437  
00:19:43,750 --> 00:19:41,820  
you did you see my presentation pardon

438  
00:19:46,370 --> 00:19:43,760

me did you see my presentation and I

439

00:19:48,790 --> 00:19:46,380

enjoyed it okay because I have a

440

00:19:51,100 --> 00:19:48,800

question relates in the mainstream

441

00:19:53,930 --> 00:19:51,110

literature this connection between

442

00:19:57,830 --> 00:19:53,940

childhood trauma and physical disease

443

00:20:01,520 --> 00:19:57,840

they their proposed mechanism is a

444

00:20:03,350 --> 00:20:01,530

trauma creates risky behaviors so the

445

00:20:05,720 --> 00:20:03,360

people become alcoholic and they you

446

00:20:08,210 --> 00:20:05,730

know they take risks do you think I

447

00:20:10,330 --> 00:20:08,220

don't think that it at all do you think

448

00:20:13,250 --> 00:20:10,340

that it could be this epigenetic

449

00:20:15,880 --> 00:20:13,260

methylation that's that's turning trauma

450

00:20:20,600 --> 00:20:15,890

into disease based on what I've read I

451  
00:20:23,030 --> 00:20:20,610  
would say why not yeah if you have it's

452  
00:20:25,280 --> 00:20:23,040  
rooted in a physiology now and it brings

453  
00:20:27,230 --> 00:20:25,290  
in things such as you addressed and it's

454  
00:20:29,570 --> 00:20:27,240  
relating that the things such as obesity

455  
00:20:31,070 --> 00:20:29,580  
such as cancer that who heretofore

456  
00:20:33,380 --> 00:20:31,080  
banned thought have occurred from all

457  
00:20:36,320 --> 00:20:33,390  
these different variations and are going

458  
00:20:40,370 --> 00:20:36,330  
because a person inherited an epi

459  
00:20:42,560 --> 00:20:40,380  
mutation that inheritance produced the

460  
00:20:44,720 --> 00:20:42,570  
disease no matter the structure of their

461  
00:20:47,590 --> 00:20:44,730  
actual DNA so I think it's really

462  
00:20:50,510 --> 00:20:47,600  
fascinating I would say yeah yeah

463  
00:20:52,130 --> 00:20:50,520

because it's the psychological event and

464

00:20:54,470 --> 00:20:52,140

it's creating this physical thing so

465

00:20:56,510 --> 00:20:54,480

there has to be something physical and I

466

00:20:59,510 --> 00:20:56,520

never I didn't have an idea but I think

467

00:21:02,120 --> 00:20:59,520

it might indeed be that methylation so

468

00:21:06,980 --> 00:21:02,130

thank you so much you you made my link

469

00:21:09,500 --> 00:21:06,990

in my hypothesis go for it yes sir yes

470

00:21:11,210 --> 00:21:09,510

I'm an organizational sociologist

471

00:21:13,760 --> 00:21:11,220

and basically have spent a fair amount

472

00:21:15,830 --> 00:21:13,770

of my adult life concentrating on the

473

00:21:18,320 --> 00:21:15,840

organizational climate and I

474

00:21:19,730 --> 00:21:18,330

distinguished three the one you're

475

00:21:22,430 --> 00:21:19,740

mostly talking about it's what I call a

476

00:21:24,530 --> 00:21:22,440

pathological climate it's typically

477

00:21:27,590 --> 00:21:24,540

characterized by leaders whose number

478

00:21:32,000 --> 00:21:27,600

one interest is feathering their own

479

00:21:34,480 --> 00:21:32,010

nest a pathological climate is often

480

00:21:36,130 --> 00:21:34,490

what people refer to as a toxic climate

481

00:21:41,080 --> 00:21:36,140

that's a wonderful book on this is

482

00:21:42,910 --> 00:21:41,090

called the no policy it's really

483

00:21:46,630 --> 00:21:42,920

interesting the second one the

484

00:21:48,340 --> 00:21:46,640

bureaucratic climate has effects that

485

00:21:50,020 --> 00:21:48,350

are intermediate between that and the

486

00:21:54,310 --> 00:21:50,030

other one what I call a generative

487

00:21:57,940 --> 00:21:54,320

climate so I will give you a paper that

488

00:21:59,020 --> 00:21:57,950

I wrote I have some papers on this but

489

00:22:01,060 --> 00:21:59,030

the interesting thing is that

490

00:22:02,110 --> 00:22:01,070

pathological climates typically produce

491

00:22:05,080 --> 00:22:02,120

physical illness

492

00:22:08,110 --> 00:22:05,090

I mean people literally get sick on the

493

00:22:10,780 --> 00:22:08,120

way to work that's how you know you have

494

00:22:12,100 --> 00:22:10,790

a toxic environment yeah it was one of

495

00:22:14,830 --> 00:22:12,110

my students who told me that his father

496

00:22:16,480 --> 00:22:14,840

was an auto worker basically had

497

00:22:18,070 --> 00:22:16,490

terrible problems just driving to work

498

00:22:19,419 --> 00:22:18,080

because he was so afraid of what was

499

00:22:21,790 --> 00:22:19,429

going to happen during the day a

500

00:22:23,710 --> 00:22:21,800

generative climate tends to produce the

501  
00:22:25,270 --> 00:22:23,720  
opposite response people are excited

502  
00:22:27,100 --> 00:22:25,280  
about the work they do they're

503  
00:22:29,290 --> 00:22:27,110  
interested they're energized and so

504  
00:22:30,490 --> 00:22:29,300  
forth it's not terribly surprising that

505  
00:22:32,650 --> 00:22:30,500  
many of the high performance

506  
00:22:35,620 --> 00:22:32,660  
organizations have a generative climate

507  
00:22:37,510 --> 00:22:35,630  
and I did a big study of the China Lake

508  
00:22:39,400 --> 00:22:37,520  
naval weapons center which interesting

509  
00:22:41,530 --> 00:22:39,410  
enough had extraordinary generative

510  
00:22:43,180 --> 00:22:41,540  
climate so if you're interested in this

511  
00:22:44,919 --> 00:22:43,190  
I'll give you a paper but anybody else

512  
00:22:47,200 --> 00:22:44,929  
is instan I've got charts and things

513  
00:22:48,790 --> 00:22:47,210

like that ok I'm very interested thank

514

00:22:50,860 --> 00:22:48,800

you for the paper and be thank you for

515

00:22:53,590 --> 00:22:50,870

presenting the flipside to the ill

516

00:22:55,270 --> 00:22:53,600

health partner yeah well but I see that

517

00:22:57,100 --> 00:22:55,280

that the thing is did you go from

518

00:22:59,590 --> 00:22:57,110

pathological to generative there's a

519

00:23:07,420 --> 00:22:59,600

huge range of responses that are all

520

00:23:14,710 --> 00:23:12,250

oh yes so I've to two comments one I'd

521

00:23:17,350 --> 00:23:14,720

like to hear a little bit more about the

522

00:23:21,580 --> 00:23:17,360

environmental toxins in the in the DNA

523

00:23:23,200 --> 00:23:21,590

and secondly even I found an old Journal

524

00:23:25,510 --> 00:23:23,210

article talking about from a French

525

00:23:28,480 --> 00:23:25,520

journal about 200 years ago talked about

526

00:23:29,590 --> 00:23:28,490

legal medicine and 50 years ago a Cuban

527

00:23:32,590 --> 00:23:29,600

was saying well when you get to two

528

00:23:34,000 --> 00:23:32,600

together disaster results and so

529

00:23:36,550 --> 00:23:34,010

somebody preceded you on that one

530

00:23:37,960 --> 00:23:36,560

I appreciate that in terms of the

531

00:23:38,700 --> 00:23:37,970

environmental toxins that's very

532

00:23:41,230 --> 00:23:38,710

interesting

533

00:23:44,470 --> 00:23:41,240

BPA's the chemicals that go into making

534

00:23:46,600 --> 00:23:44,480

all kinds of plastic leech they Lita's

535

00:23:49,950 --> 00:23:46,610

into the water so if you buy a bottle of

536

00:23:52,870 --> 00:23:49,960

water you're getting BPA's they are

537

00:23:55,630 --> 00:23:52,880

firmly established to producing

538

00:23:59,910 --> 00:23:55,640

epimutations they have the research

539

00:24:02,350 --> 00:23:59,920

relating BPA's to cancer is extensive

540

00:24:05,200 --> 00:24:02,360

there has been studies that show by

541

00:24:09,250 --> 00:24:05,210

driving in heavily exhaust areas on the

542

00:24:10,960 --> 00:24:09,260

road within seven days your methylation

543

00:24:17,740 --> 00:24:10,970

patterns will change to an aberrant

544

00:24:20,290 --> 00:24:17,750

profile the there's an assortment of

545

00:24:22,750 --> 00:24:20,300

toxins their environment fuel so if you

546

00:24:24,970 --> 00:24:22,760

ran an airport you're exposing yourself

547

00:24:27,550 --> 00:24:24,980

that is known and documented to produce

548

00:24:29,830 --> 00:24:27,560

a few mutations so it is kind of a

549

00:24:32,170 --> 00:24:29,840

horrible thing and that goes hand in

550

00:24:38,170 --> 00:24:32,180

hand with global warming which again

551  
00:24:41,200 --> 00:24:38,180  
doesn't occur the and so the the remedy

552  
00:24:43,510 --> 00:24:41,210  
to that one remedy for the psychological

553  
00:24:46,090 --> 00:24:43,520  
state they all work together as was

554  
00:24:48,010 --> 00:24:46,100  
pointed out is meditation because

555  
00:24:50,530 --> 00:24:48,020  
meditation goes into its Addie

556  
00:24:52,690 --> 00:24:50,540  
automatisation response which by its

557  
00:24:57,420 --> 00:24:52,700  
very nature interdict the bureaucratic

558  
00:25:00,820 --> 00:24:57,430  
mind kind of influence eat green leafy

559  
00:25:02,590 --> 00:25:00,830  
vegetables that's the single best thing

560  
00:25:05,830 --> 00:25:02,600  
you can do to help establish good DNA

561  
00:25:07,390 --> 00:25:05,840  
methylation patterns and the other thing

562  
00:25:08,910 --> 00:25:07,400  
is work to have things such as

563  
00:25:12,690 --> 00:25:08,920

environmental pollution

564

00:25:15,930 --> 00:25:12,700

because it's it is clearly an adverse

565

00:25:17,800 --> 00:25:15,940

physiologic event of those events thank