

1
00:00:03,299 --> 00:00:06,419
[Music]

2
00:00:07,900 --> 00:00:12,859
I'm going to share some data that I've

3
00:00:10,699 --> 00:00:15,250
been collecting over the years doing

4
00:00:12,859 --> 00:00:17,629
brain mapping studies of healers and

5
00:00:15,250 --> 00:00:22,160
I've also worked with some meditators

6
00:00:17,629 --> 00:00:24,109
and the healers include mystics and

7
00:00:22,160 --> 00:00:28,429
shamans you'll see some data and some

8
00:00:24,109 --> 00:00:30,649
shamans as well now how did I ever get

9
00:00:28,429 --> 00:00:33,530
into something like this and I'll

10
00:00:30,649 --> 00:00:34,549
briefly give you the story I was working

11
00:00:33,530 --> 00:00:37,160
at the University of Washington Medical

12
00:00:34,549 --> 00:00:38,238
Center running an EEG lab there in the

13
00:00:37,159 --> 00:00:41,390
Department of Radiology

14
00:00:38,238 --> 00:00:45,439
and I attended one of those whole-life

15
00:00:41,390 --> 00:00:48,620
body expo I got on a table and received

16
00:00:45,439 --> 00:00:51,378
a Reiki treatment and I got off 20

17
00:00:48,619 --> 00:00:53,780
minutes later seeing a halo around the

18
00:00:51,378 --> 00:00:56,268
woman and feeling like something had

19
00:00:53,780 --> 00:01:00,170
really happened had shifted inside of me

20
00:00:56,268 --> 00:01:01,909
now I've done a lot of bodywork

21
00:01:00,170 --> 00:01:04,549
transformational work you know

22
00:01:01,909 --> 00:01:08,319
psychoactives etc so I knew something

23
00:01:04,549 --> 00:01:14,329
had happened so I left there with that

24
00:01:08,319 --> 00:01:16,369
thought that this may be available you

25
00:01:14,329 --> 00:01:18,379
know you know you might see something if

26
00:01:16,370 --> 00:01:20,750
you hook up a healer to an EEG machine

27
00:01:18,379 --> 00:01:23,899
and discover that they're doing

28
00:01:20,750 --> 00:01:26,299
something different so that was the the

29

00:01:23,900 --> 00:01:30,650
seed that started this and in the short

30
00:01:26,299 --> 00:01:33,170
time I was enrolled in a Reiki group and

31
00:01:30,650 --> 00:01:35,120
I got up to second level and I'm a Reiki

32
00:01:33,170 --> 00:01:37,250
practitioner I don't do it a lot that I

33
00:01:35,120 --> 00:01:39,320
love to do it so I had access to all

34
00:01:37,250 --> 00:01:40,670
this Reiki community so they started

35
00:01:39,319 --> 00:01:43,099
coming in the lab and I started to hook

36
00:01:40,670 --> 00:01:44,750
him up and getting data and pretty soon

37
00:01:43,099 --> 00:01:46,069
other healers were learning about this

38
00:01:44,750 --> 00:01:50,709
and they were coming and knocking on the

39
00:01:46,069 --> 00:01:56,809
door and before long I had a large

40
00:01:50,709 --> 00:01:58,909
sample to work with I like to show this

41
00:01:56,810 --> 00:02:02,930
slide because I think this is where it

42
00:01:58,909 --> 00:02:05,629
all starts this is a beautiful image of

43
00:02:02,930 --> 00:02:08,780

a rock painting from South Africa about

44

00:02:05,629 --> 00:02:11,030

approximately ten thousand years and it

45

00:02:08,780 --> 00:02:14,509

shows a healing circle and in the center

46

00:02:11,030 --> 00:02:16,520

is the healer shaman you can't see the

47

00:02:14,509 --> 00:02:19,299

client very well it's kind of washed out

48

00:02:16,520 --> 00:02:22,560

but he's doing hands-on healing and this

49

00:02:19,300 --> 00:02:27,760

Circle is all of the support in

50

00:02:22,560 --> 00:02:30,969

traditional healing rituals the people

51

00:02:27,759 --> 00:02:34,120

participate this guy here has his rack

52

00:02:30,969 --> 00:02:37,750

of antennas in place and everything and

53

00:02:34,120 --> 00:02:40,420

he's probably also a healer working with

54

00:02:37,750 --> 00:02:44,620

perhaps life force energy depicted there

55

00:02:40,419 --> 00:02:45,909

by the snake all right so this is just

56

00:02:44,620 --> 00:02:49,780

something very quick

57

00:02:45,909 --> 00:02:53,770

most of these healers describe it as

58
00:02:49,780 --> 00:03:00,750
some energy there's many traditions and

59
00:02:53,770 --> 00:03:08,860
they the common word is something like

60
00:03:00,750 --> 00:03:11,699
mana energy Chi Elan vital arutam in the

61
00:03:08,860 --> 00:03:16,690
tradition of the ecuadorian Schwar

62
00:03:11,699 --> 00:03:19,659
kundalini etc some people just say I

63
00:03:16,689 --> 00:03:21,609
just channeled Christ energy I just

64
00:03:19,659 --> 00:03:25,840
channeled universal life force energy it

65
00:03:21,610 --> 00:03:29,500
works through me so and I've had the

66
00:03:25,840 --> 00:03:31,530
good fortune to meet many healers of

67
00:03:29,500 --> 00:03:33,580
many diverse traditions who have been

68
00:03:31,530 --> 00:03:35,289
interested in getting hooked up and

69
00:03:33,580 --> 00:03:40,360
tested so I'm gonna give you like a

70
00:03:35,289 --> 00:03:45,209
comparative survey these are some Alex

71
00:03:40,360 --> 00:03:47,880
gray paintings which I think depict the

72
00:03:45,209 --> 00:03:50,349
energy healing component of all this

73
00:03:47,879 --> 00:03:53,319
once you start doing this you you sort

74
00:03:50,349 --> 00:03:55,150
of cross over into science spirituality

75
00:03:53,319 --> 00:03:59,889
so I'm hanging out there in the science

76
00:03:55,150 --> 00:04:03,250
spirituality conversation the probably

77
00:03:59,889 --> 00:04:06,219
the first in fact the word therapeutics

78
00:04:03,250 --> 00:04:09,909
comes from this escalate peon tradition

79
00:04:06,219 --> 00:04:13,359
in greece which is really shamanic

80
00:04:09,909 --> 00:04:17,589
medicine in classical greek times now a

81
00:04:13,360 --> 00:04:20,530
little word about EEG the discoverer of

82
00:04:17,589 --> 00:04:25,599
EG was a German psychiatrist Hans Berger

83
00:04:20,529 --> 00:04:30,819
and he was motivated by a sigh incident

84
00:04:25,600 --> 00:04:32,720
he was nearly badly injured by an

85
00:04:30,819 --> 00:04:39,290
accident when he was in the

86

00:04:32,720 --> 00:04:42,560
I mean Canyon almost hmm you know rolled

87
00:04:39,290 --> 00:04:45,680
over him and that same it says describes

88
00:04:42,560 --> 00:04:49,430
a story he received a telegram from his

89
00:04:45,680 --> 00:04:51,139
father I think it says and his sister

90
00:04:49,430 --> 00:04:53,959
had had a premonition that he was going

91
00:04:51,139 --> 00:04:56,569
to have an accident so this event marked

92
00:04:53,959 --> 00:05:00,229
him for his life and he was determined

93
00:04:56,569 --> 00:05:02,029
that some form of communication some

94
00:05:00,230 --> 00:05:06,800
information had reached him

95
00:05:02,029 --> 00:05:08,750
telepathically and this is why he got

96
00:05:06,800 --> 00:05:10,970
into exploring the possibilities of

97
00:05:08,750 --> 00:05:13,129
detecting something in the brain and he

98
00:05:10,970 --> 00:05:15,410
used his son initially as a subject to

99
00:05:13,129 --> 00:05:18,310
do and he described the first alpha

100
00:05:15,410 --> 00:05:20,660

rhythm and didn't publish until 1929

101

00:05:18,310 --> 00:05:22,160
okay these are just some slides to

102

00:05:20,660 --> 00:05:25,130
entertain you because these are

103

00:05:22,160 --> 00:05:26,600
different healing traditions I have had

104

00:05:25,129 --> 00:05:29,060
the opportunity to work with the which

105

00:05:26,600 --> 00:05:33,110
all people the peyote people in Mexico

106

00:05:29,060 --> 00:05:35,720
and also the ayahuasca Amazonian

107

00:05:33,110 --> 00:05:42,139
tradition the Kuna so these are all

108

00:05:35,720 --> 00:05:43,840
depictions of healers doing work all

109

00:05:42,139 --> 00:05:48,430
right

110

00:05:43,839 --> 00:05:51,649
everyone wants to know what is the whole

111

00:05:48,430 --> 00:05:53,449
summary bottom line of this and that's a

112

00:05:51,649 --> 00:05:56,929
difficult question to answer because

113

00:05:53,449 --> 00:05:58,939
I've sampled over 30 healers perhaps

114

00:05:56,930 --> 00:06:02,569
more but the data the good data is from

115
00:05:58,939 --> 00:06:06,469
about 30 and this is these are the

116
00:06:02,569 --> 00:06:08,800
findings the dominant frequency band

117
00:06:06,470 --> 00:06:10,340
that shows significant changes

118
00:06:08,800 --> 00:06:15,079
consistent robust

119
00:06:10,339 --> 00:06:17,779
is alpha now there are healers who don't

120
00:06:15,079 --> 00:06:19,490
produce the classic alpha they live in

121
00:06:17,779 --> 00:06:22,609
theta and I'll show you an example of

122
00:06:19,490 --> 00:06:24,590
one and these are kind of a special

123
00:06:22,610 --> 00:06:27,889
group and then there are the individuals

124
00:06:24,589 --> 00:06:30,079
that don't have very much alpha for

125
00:06:27,889 --> 00:06:32,930
reasons of having had a traumatic brain

126
00:06:30,079 --> 00:06:35,359
injury or just their wired in a

127
00:06:32,930 --> 00:06:37,280
different way and we'll see some data of

128
00:06:35,360 --> 00:06:40,848
some of these individuals and they

129
00:06:37,279 --> 00:06:42,918
usually have Delta beta however one of

130
00:06:40,848 --> 00:06:46,009
them when he was in the healing state

131
00:06:42,918 --> 00:06:49,909
brought up his alpha and you'll see that

132
00:06:46,009 --> 00:06:53,539
okay so we start with this is a medicine

133
00:06:49,910 --> 00:06:57,980
man apache friend of mine that I had an

134
00:06:53,540 --> 00:06:59,780
opportunity to work with and this was a

135
00:06:57,980 --> 00:07:02,840
PowerPoint that we threw together for

136
00:06:59,779 --> 00:07:05,419
him but what it shows is you do a

137
00:07:02,839 --> 00:07:08,389
baseline you do about a 10-minute eyes

138
00:07:05,420 --> 00:07:11,210
close resting baseline recording and

139
00:07:08,389 --> 00:07:14,439
then you ask the healer to do their

140
00:07:11,209 --> 00:07:17,479
thing now they have to be able to remain

141
00:07:14,439 --> 00:07:21,230
motionless relatively so you won't

142
00:07:17,480 --> 00:07:24,620
record movement artifacts so a lot of it

143

00:07:21,230 --> 00:07:26,540
is their ability to go into that state

144
00:07:24,620 --> 00:07:27,620
and imagine that they're doing all the

145
00:07:26,540 --> 00:07:29,930
things that they do when they're healing

146
00:07:27,620 --> 00:07:32,870
because you run into healers that say

147
00:07:29,930 --> 00:07:35,480
well I only work by walking around my

148
00:07:32,870 --> 00:07:37,970
client and waving my hands and I need to

149
00:07:35,480 --> 00:07:40,129
have all of this activity however most

150
00:07:37,970 --> 00:07:43,790
of them you can talk them into just

151
00:07:40,129 --> 00:07:47,149
sitting still and imagining it so this

152
00:07:43,790 --> 00:07:49,220
is a case where this man doesn't have

153
00:07:47,149 --> 00:07:54,349
very much alpha in fact very unusual

154
00:07:49,220 --> 00:07:57,500
alpha which has a focus frontal left

155
00:07:54,350 --> 00:07:59,689
frontal the traditional common normal

156
00:07:57,500 --> 00:08:03,319
alpha is parietal occipital back here

157
00:07:59,689 --> 00:08:08,600

however he did shift his alpha central

158

00:08:03,319 --> 00:08:10,339

it increased by about 67% and all of

159

00:08:08,600 --> 00:08:13,730

these are called connectivity maps and

160

00:08:10,339 --> 00:08:16,459

you can see these are coherence is is a

161

00:08:13,730 --> 00:08:18,860

measure of synchrony between different

162

00:08:16,459 --> 00:08:22,489

sites all the possible combinations of

163

00:08:18,860 --> 00:08:24,650

paired sites so his brain is going into

164

00:08:22,490 --> 00:08:27,439

different states that's the proof right

165

00:08:24,649 --> 00:08:28,310

here from these maps this one shows a

166

00:08:27,439 --> 00:08:32,990

similar pattern

167

00:08:28,310 --> 00:08:36,289

it's an asymmetry now the client that he

168

00:08:32,990 --> 00:08:39,200

worked with had had some head injury

169

00:08:36,289 --> 00:08:41,089

issues and in fact was a woman that I

170

00:08:39,200 --> 00:08:43,430

mapped several times and every time we

171

00:08:41,090 --> 00:08:46,940

would get the same kind of a map so her

172
00:08:43,429 --> 00:08:49,129
eg signature was quite reliable and so

173
00:08:46,940 --> 00:08:52,730
he shifted it in particular these

174
00:08:49,129 --> 00:08:54,559
coherence lines these are z-scores this

175
00:08:52,730 --> 00:08:57,740
is reference to a database this is a

176
00:08:54,559 --> 00:08:58,599
clinical eg suite called neuro guide so

177
00:08:57,740 --> 00:09:01,899
this

178
00:08:58,600 --> 00:09:04,209
move now to this position and phase lag

179
00:09:01,899 --> 00:09:07,600
is a measure of conduction velocity in

180
00:09:04,208 --> 00:09:11,409
the brain so there's the thick lines are

181
00:09:07,600 --> 00:09:13,860
the +3 or more standard deviation

182
00:09:11,409 --> 00:09:16,448
z-scores and so these shifted as well

183
00:09:13,860 --> 00:09:18,039
she did not show an increase in alpha

184
00:09:16,448 --> 00:09:21,539
she didn't have very much alpha to begin

185
00:09:18,039 --> 00:09:24,278
with that meant that level their 12

186
00:09:21,539 --> 00:09:28,659
micro volts square is very much on the

187
00:09:24,278 --> 00:09:33,669
low side now let's get into some data

188
00:09:28,659 --> 00:09:38,769
here this is me I decided it was high

189
00:09:33,669 --> 00:09:41,828
time for my EEG to attempt to do a Reiki

190
00:09:38,769 --> 00:09:44,589
healing to see if I could also increase

191
00:09:41,828 --> 00:09:48,609
my alpha power and indeed I was able to

192
00:09:44,589 --> 00:09:51,600
do that so this is what this gives you

193
00:09:48,610 --> 00:09:55,269
is a topographic map with the peak

194
00:09:51,600 --> 00:09:57,459
values shown by the scales here so this

195
00:09:55,269 --> 00:10:00,009
is like reading a weather map ok so this

196
00:09:57,458 --> 00:10:03,458
would be now Denver and this would be

197
00:10:00,009 --> 00:10:06,730
Nova Scotian or something and so my

198
00:10:03,458 --> 00:10:09,789
alpha is highest at P Z which is the

199
00:10:06,730 --> 00:10:14,860
midline parietal and I increased it by

200

00:10:09,789 --> 00:10:16,480
approximately 49% so more experienced

201
00:10:14,860 --> 00:10:21,430
Reiki healers can increase it even

202
00:10:16,480 --> 00:10:25,120
further these are some power frequency

203
00:10:21,429 --> 00:10:29,708
spectra these are FFTs that you compute

204
00:10:25,120 --> 00:10:31,709
from the raw EEG and so this is a quick

205
00:10:29,708 --> 00:10:34,299
convenient way to see changes in

206
00:10:31,708 --> 00:10:36,818
frequencies and power and this is an

207
00:10:34,299 --> 00:10:40,179
example from another Reiki healer notice

208
00:10:36,818 --> 00:10:43,948
the scale here is 215 that's the highest

209
00:10:40,179 --> 00:10:47,649
peak it's an occipital sight and now

210
00:10:43,948 --> 00:10:49,838
look at the scale under Reiki and so

211
00:10:47,649 --> 00:10:52,240
again these are the topo maps derived

212
00:10:49,839 --> 00:10:57,100
from this data they also show the

213
00:10:52,240 --> 00:10:59,198
increased values so this is the most

214
00:10:57,100 --> 00:11:01,629

consistent robust effect that I see

215

00:10:59,198 --> 00:11:05,469

across many healing modalities and we'll

216

00:11:01,629 --> 00:11:09,068

see examples of that okay here's another

217

00:11:05,470 --> 00:11:12,310

one now in this case the client is the

218

00:11:09,068 --> 00:11:15,039

one recorded with the EEG so I

219

00:11:12,309 --> 00:11:18,069

most of the tests have been recording

220

00:11:15,039 --> 00:11:20,949

from the healer but I have now a sizable

221

00:11:18,070 --> 00:11:23,700

body of data recording from the client

222

00:11:20,950 --> 00:11:26,590

receiving the healing I have not done

223

00:11:23,700 --> 00:11:30,940

simultaneous paired recordings of client

224

00:11:26,590 --> 00:11:32,860

and healer that's gonna be next but this

225

00:11:30,940 --> 00:11:34,870

was surprising the clients that are

226

00:11:32,860 --> 00:11:38,169

receiving a healing also show a big

227

00:11:34,870 --> 00:11:41,259

boost in alpha power and in this case

228

00:11:38,169 --> 00:11:43,990

this was a very powerful healer who

229
00:11:41,259 --> 00:11:47,559
worked on a woman and brought up her

230
00:11:43,990 --> 00:11:50,830
alpha so you can see that it increased

231
00:11:47,559 --> 00:11:54,519
by approximately 46% these are the

232
00:11:50,830 --> 00:11:58,480
before and during I call it the healing

233
00:11:54,519 --> 00:12:03,309
state so in in all of these studies I'm

234
00:11:58,480 --> 00:12:06,940
really interested in defining a brain

235
00:12:03,309 --> 00:12:10,299
state a change in a brain state that is

236
00:12:06,940 --> 00:12:15,060
occurring during the healing state

237
00:12:10,299 --> 00:12:19,649
during the actual practice of the

238
00:12:15,059 --> 00:12:22,269
session I'm not concerned with the

239
00:12:19,649 --> 00:12:24,309
effects of the healing the outcomes

240
00:12:22,269 --> 00:12:26,110
whether you know they healed an illness

241
00:12:24,309 --> 00:12:30,429
or disease that's a whole other study

242
00:12:26,110 --> 00:12:33,840
that needs to be addressed later this is

243
00:12:30,429 --> 00:12:37,179
from recently from a Chinese woman who

244
00:12:33,840 --> 00:12:39,580
practices Qi Gong and some other

245
00:12:37,179 --> 00:12:44,199
techniques and she wanted to be hooked

246
00:12:39,580 --> 00:12:49,300
up and we got a nice 48% increase in her

247
00:12:44,200 --> 00:12:52,330
alpha power so she very knew very little

248
00:12:49,299 --> 00:12:54,579
of Reiki or Jouret or pranic healing or

249
00:12:52,330 --> 00:12:57,040
any of those other modalities this is

250
00:12:54,580 --> 00:13:00,370
the theta healer that I worked with a

251
00:12:57,039 --> 00:13:04,439
woman in Texas who is a well-known

252
00:13:00,370 --> 00:13:07,269
healer in the area you can see that she

253
00:13:04,440 --> 00:13:09,510
does not have a normal alpha peak in

254
00:13:07,269 --> 00:13:13,240
fact her principal frequency is around

255
00:13:09,509 --> 00:13:16,480
6.5 right there she has a prominent peak

256
00:13:13,240 --> 00:13:19,659
and then she has a beta a low beta peak

257

00:13:16,480 --> 00:13:21,930
which is like a harmonic here at 13

258
00:13:19,659 --> 00:13:21,929
Hertz

259
00:13:22,559 --> 00:13:32,009
this is one of the sessions that we did

260
00:13:25,370 --> 00:13:35,220
now she is well I should mention this

261
00:13:32,009 --> 00:13:37,710
that theta healers typically have very

262
00:13:35,220 --> 00:13:38,399
high sensitivity to reading the their

263
00:13:37,710 --> 00:13:43,129
empaths

264
00:13:38,399 --> 00:13:47,220
they have access to their subconscious

265
00:13:43,129 --> 00:13:49,769
they often live in a sort of a semi

266
00:13:47,220 --> 00:13:51,480
translate in her case she's all the time

267
00:13:49,769 --> 00:13:57,809
she's communicating with angelic guides

268
00:13:51,480 --> 00:13:59,639
and you know she's a character so this

269
00:13:57,809 --> 00:14:03,269
is her brain and now this is the effect

270
00:13:59,639 --> 00:14:06,000
of her healing a client and I had never

271
00:14:03,269 --> 00:14:08,490

seen anything like this his alpha power

272

00:14:06,000 --> 00:14:12,360
was increased almost two hundred fifty

273

00:14:08,490 --> 00:14:14,789
percent at Oh - that's occipital right

274

00:14:12,360 --> 00:14:17,159
on this side and this is called a

275

00:14:14,789 --> 00:14:19,919
difference map this is the topo map

276

00:14:17,159 --> 00:14:22,829
derived from this data and what you do

277

00:14:19,919 --> 00:14:27,679
here is you subtract the baseline from

278

00:14:22,830 --> 00:14:30,660
the treatment and the only positive

279

00:14:27,679 --> 00:14:32,159
colors show up in the Alpha indicating

280

00:14:30,659 --> 00:14:34,589
that this is where the big change

281

00:14:32,159 --> 00:14:37,199
happened it's a very significant change

282

00:14:34,590 --> 00:14:40,460
so that's another quite graphic way to

283

00:14:37,200 --> 00:14:42,780
show that changes in the different

284

00:14:40,460 --> 00:14:45,540
frequency bands I had an opportunity

285

00:14:42,779 --> 00:14:48,120
years ago to work with Richard Bartlett

286
00:14:45,539 --> 00:14:50,579
the matrix energetics guy this is when

287
00:14:48,120 --> 00:14:54,419
he had long hair and he was living near

288
00:14:50,580 --> 00:14:58,110
Seattle and wanted to be tested so

289
00:14:54,419 --> 00:15:01,529
they're at the bottom right he's sending

290
00:14:58,110 --> 00:15:04,289
his matrix energetic healing to his

291
00:15:01,529 --> 00:15:07,439
daughter justice I believe is her name

292
00:15:04,289 --> 00:15:13,279
and you know Richard is a very playful

293
00:15:07,440 --> 00:15:17,580
guy and quite in a class of his own and

294
00:15:13,279 --> 00:15:21,829
so what was interesting was he was able

295
00:15:17,580 --> 00:15:25,170
to raise the receiver the clients alpha

296
00:15:21,830 --> 00:15:28,370
this is the before you see there's

297
00:15:25,169 --> 00:15:31,949
here's the ten Hertz there's very few

298
00:15:28,370 --> 00:15:35,240
scattered Peaks you know and so you

299
00:15:31,950 --> 00:15:38,450
average this is 300

300
00:15:35,240 --> 00:15:42,139
a pox each epoch is about eight seconds

301
00:15:38,450 --> 00:15:44,980
so and then when she's receiving the

302
00:15:42,139 --> 00:15:49,039
healing there is now beginning to show a

303
00:15:44,980 --> 00:15:52,339
peak at ten the red bar is the Alpha bar

304
00:15:49,039 --> 00:15:53,659
this is lexico or software now I work

305
00:15:52,339 --> 00:15:56,000
with the different system it's our

306
00:15:53,659 --> 00:15:57,259
amplifiers but these are compressed

307
00:15:56,000 --> 00:15:59,480
spectral arrays and they show very

308
00:15:57,259 --> 00:16:02,208
nicely and you can just get the numbers

309
00:15:59,480 --> 00:16:05,269
right off here average power peak to

310
00:16:02,208 --> 00:16:07,579
peak now this is Richard Bartlett's

311
00:16:05,269 --> 00:16:10,490
brain when he's doing his energy and

312
00:16:07,580 --> 00:16:13,509
energy matrix healing he doesn't have

313
00:16:10,490 --> 00:16:18,110
normal alpha as you can see very very

314

00:16:13,509 --> 00:16:20,480
reduced amplitude not at some sites

315
00:16:18,110 --> 00:16:22,159
these are frontal sites so I didn't show

316
00:16:20,480 --> 00:16:24,680
his occipital sites data they would

317
00:16:22,159 --> 00:16:26,569
probably be more out for there but this

318
00:16:24,679 --> 00:16:31,278
is what I was able to capture he

319
00:16:26,570 --> 00:16:35,450
generates bursts of gamma so this was a

320
00:16:31,278 --> 00:16:37,789
clear demonstration he intuited that he

321
00:16:35,450 --> 00:16:39,500
was gonna go there he said to me let's

322
00:16:37,789 --> 00:16:43,278
go for gamma because that's where I

323
00:16:39,500 --> 00:16:44,899
think I do my work and indeed and I have

324
00:16:43,278 --> 00:16:47,120
not been able to replicate that with

325
00:16:44,899 --> 00:16:49,940
other healers who claim that they also

326
00:16:47,120 --> 00:16:51,950
work in gamma frequencies now this is

327
00:16:49,940 --> 00:16:55,010
interesting data this is from a Swami an

328
00:16:51,950 --> 00:16:56,870

Indian Swami Nithyananda that I had the

329

00:16:55,009 --> 00:16:59,480

opportunity to work with and he told me

330

00:16:56,870 --> 00:17:02,539

that he's always meditating so his

331

00:16:59,480 --> 00:17:05,328

baseline and his meditation maps look

332

00:17:02,539 --> 00:17:08,149

almost identical okay

333

00:17:05,328 --> 00:17:11,539

these are FFTs and these are the sites

334

00:17:08,150 --> 00:17:12,949

the 19 channels of the 10:20 system the

335

00:17:11,539 --> 00:17:16,938

only difference is a little bit more

336

00:17:12,949 --> 00:17:19,640

beta shown here this color in the low

337

00:17:16,939 --> 00:17:22,550

beta around the 14 Hertz or so this

338

00:17:19,640 --> 00:17:25,550

little green peak alright well he went

339

00:17:22,549 --> 00:17:28,250

into a Samadhi State at that same

340

00:17:25,549 --> 00:17:31,789

session okay and the only difference

341

00:17:28,250 --> 00:17:34,700

there is that he increases his beta okay

342

00:17:31,789 --> 00:17:37,569

so quite remarkable you see the little

343
00:17:34,700 --> 00:17:42,650
green peak now when he's doing healing

344
00:17:37,569 --> 00:17:46,579
his alpha comes up okay so this is

345
00:17:42,650 --> 00:17:48,559
another indication that even a Swami

346
00:17:46,579 --> 00:17:50,599
like that works in alpha these are the

347
00:17:48,558 --> 00:17:53,509
shamans and I'll just rush through this

348
00:17:50,599 --> 00:17:58,219
very quickly Peruvian shaman here's the

349
00:17:53,509 --> 00:18:00,769
Alpha increase in the client this is

350
00:17:58,220 --> 00:18:02,960
another shaman a woman from Oaxaca the

351
00:18:00,769 --> 00:18:06,200
Mazatec tradition she does something

352
00:18:02,960 --> 00:18:11,149
that she calls a singing healing and her

353
00:18:06,200 --> 00:18:13,038
alpha went way up this is somebody I

354
00:18:11,148 --> 00:18:16,008
very recently did who does something

355
00:18:13,038 --> 00:18:17,658
called holographic visualization where

356
00:18:16,009 --> 00:18:19,308
she's actually working on the hologram

357
00:18:17,659 --> 00:18:21,440
of the body that she's repairing and

358
00:18:19,308 --> 00:18:24,918
she's oh she does intense visualization

359
00:18:21,440 --> 00:18:28,100
her alpha went up this is a deeksha

360
00:18:24,919 --> 00:18:31,009
healer and so the client receiving the

361
00:18:28,099 --> 00:18:33,998
healing big increase in alpha same thing

362
00:18:31,009 --> 00:18:36,618
difference maps showing the Alpha and

363
00:18:33,999 --> 00:18:40,909
now this is a Buddhist monk that I

364
00:18:36,618 --> 00:18:43,819
recorded also in Texas who could produce

365
00:18:40,909 --> 00:18:45,970
alpha when he was doing a very specific

366
00:18:43,819 --> 00:18:49,999
type of meditation that involved a

367
00:18:45,970 --> 00:18:51,980
visualization task alright his alpha

368
00:18:49,999 --> 00:18:54,350
changed appreciably doing visualization

369
00:18:51,980 --> 00:18:57,470
you can see the peak is off the charts

370
00:18:54,349 --> 00:19:02,599
here okay these are just some statistics

371

00:18:57,470 --> 00:19:07,788
I have this was the early one an N of 20

372
00:19:02,599 --> 00:19:10,699
analyzed baseline average power values

373
00:19:07,788 --> 00:19:12,408
are increased consistently the numbers

374
00:19:10,700 --> 00:19:16,100
are very significant these are

375
00:19:12,409 --> 00:19:18,399
correlated samples you're looking at a

376
00:19:16,099 --> 00:19:23,269
healer as his own self control

377
00:19:18,398 --> 00:19:27,288
this is values for the clients receiving

378
00:19:23,269 --> 00:19:28,849
the healer I have an N of nine and also

379
00:19:27,288 --> 00:19:33,740
very significant increases in alpha

380
00:19:28,849 --> 00:19:39,490
power so in conclusion I think the most

381
00:19:33,740 --> 00:19:42,079
important things here are oh pardon me

382
00:19:39,490 --> 00:19:45,888
what does this really mean increased

383
00:19:42,079 --> 00:19:47,778
power is is a result of increased

384
00:19:45,888 --> 00:19:50,058
synchrony in increased numbers of

385
00:19:47,778 --> 00:19:53,179

neurons communicating and firing

386

00:19:50,058 --> 00:19:56,470

together so this means that more areas

387

00:19:53,179 --> 00:19:59,269

of the brain are recruited and are

388

00:19:56,470 --> 00:20:01,539

linking up and firing synchronously

389

00:19:59,269 --> 00:20:05,089

often you see a lot of phase

390

00:20:01,539 --> 00:20:08,029

coherence during the alpha increase in

391

00:20:05,089 --> 00:20:09,859

in power and how do they get there well

392

00:20:08,029 --> 00:20:12,678

most of them say they just let go and

393

00:20:09,859 --> 00:20:15,229

they get out of the way so that coupled

394

00:20:12,679 --> 00:20:17,420

with visualization would get you into an

395

00:20:15,230 --> 00:20:20,450

alpha state and then I've done some

396

00:20:17,420 --> 00:20:22,820

distant healing a woman from Seattle

397

00:20:20,450 --> 00:20:25,580

sending healing to a client in

398

00:20:22,819 --> 00:20:27,980

California we got an alpha increase this

399

00:20:25,579 --> 00:20:29,919

is my most recent data so it's very

400
00:20:27,980 --> 00:20:32,509
exciting because I may be able to

401
00:20:29,920 --> 00:20:35,840
increase that sample size and show that

402
00:20:32,509 --> 00:20:38,670
this is a really non-local effect so

403
00:20:35,839 --> 00:20:45,368
I'll leave you with that and I thank you

404
00:20:38,670 --> 00:20:45,369
[Applause]

405
00:20:46,599 --> 00:20:58,839
turn that on here we go that much better

406
00:20:48,740 --> 00:21:02,000
all right if you have any questions your

407
00:20:58,839 --> 00:21:05,299
your coherence maps were those just

408
00:21:02,000 --> 00:21:06,799
alpha coherence Maps yes okay right do

409
00:21:05,299 --> 00:21:09,740
you think if you did say to cohere have

410
00:21:06,799 --> 00:21:11,480
you done that there's a lot of coherence

411
00:21:09,740 --> 00:21:14,120
data that I haven't analyzed it because

412
00:21:11,480 --> 00:21:18,529
it's quite complex to analyze coherence

413
00:21:14,119 --> 00:21:20,689
and you don't see anything that looks

414
00:21:18,529 --> 00:21:23,420
consistent from trial to trial you know

415
00:21:20,690 --> 00:21:25,730
I mean when you look at an EEG you know

416
00:21:23,420 --> 00:21:28,490
the complexity of analyzing an EEG and

417
00:21:25,730 --> 00:21:31,069
then when you have many and you're

418
00:21:28,490 --> 00:21:34,339
looking for something that you can say

419
00:21:31,069 --> 00:21:37,639
this change is systematically it's a big

420
00:21:34,339 --> 00:21:38,808
task so that's why I focused on the

421
00:21:37,640 --> 00:21:40,759
Alpha because that was the most

422
00:21:38,808 --> 00:21:43,940
repeatable reliable consistent effect

423
00:21:40,759 --> 00:21:45,679
and it's a big effect I like something

424
00:21:43,940 --> 00:21:49,160
greater than 30% I'm an

425
00:21:45,679 --> 00:21:50,480
electrophysiologist and I I don't just

426
00:21:49,160 --> 00:21:51,830
want to rely on statistics to

427
00:21:50,480 --> 00:21:54,259
demonstrate an effect I want to actually

428

00:21:51,829 --> 00:21:58,099
see it in the raw data you know yeah

429
00:21:54,259 --> 00:22:02,179
sure but I thank you for that I will

430
00:21:58,099 --> 00:22:04,579
look at that I I'm a simian hein

431
00:22:02,179 --> 00:22:06,140
can you comment on this machine that

432
00:22:04,579 --> 00:22:10,009
I've read about recently that's being

433
00:22:06,140 --> 00:22:12,590
used by DARPA to Train snipers to do

434
00:22:10,009 --> 00:22:14,629
their work faster and better apparently

435
00:22:12,589 --> 00:22:15,259
they can train to become a sniper twice

436
00:22:14,630 --> 00:22:17,090
as fast

437
00:22:15,259 --> 00:22:19,039
when they're in an alpha state but it's

438
00:22:17,089 --> 00:22:20,240
induced by a machine and I'm wondering

439
00:22:19,039 --> 00:22:21,259
what the difference is between that and

440
00:22:20,240 --> 00:22:24,950
a self-induced

441
00:22:21,259 --> 00:22:27,410
alpha state I really can't comment

442
00:22:24,950 --> 00:22:30,380

because I don't know about this but I

443

00:22:27,410 --> 00:22:33,710

think it's fascinating yeah I do narrow

444

00:22:30,380 --> 00:22:36,620

feedback so you can train to boost your

445

00:22:33,710 --> 00:22:40,700

alpha and get into alpha states and

446

00:22:36,619 --> 00:22:42,889

there's a fellow my name of Jim Hart who

447

00:22:40,700 --> 00:22:44,960

I think now lives in Canada who used to

448

00:22:42,890 --> 00:22:50,000

do alpha training and he would get

449

00:22:44,960 --> 00:22:52,640

people for a week and you know put him

450

00:22:50,000 --> 00:22:54,710

inside boots and work with alpha

451

00:22:52,640 --> 00:22:56,900

training and you know at the end of the

452

00:22:54,710 --> 00:22:58,970

week they they were talking to God

453

00:22:56,900 --> 00:23:01,759

apparently you know they they would have

454

00:22:58,970 --> 00:23:07,360

very transformative transcendent

455

00:23:01,759 --> 00:23:10,519

experiences so you know the Alpha

456

00:23:07,359 --> 00:23:13,639

frequency it's involved in many many

457
00:23:10,519 --> 00:23:16,730
things there's many the most number of

458
00:23:13,640 --> 00:23:18,320
papers in eg research are probably

459
00:23:16,730 --> 00:23:21,650
concerned with alpha it's been studied

460
00:23:18,319 --> 00:23:25,839
in innumerable ways it's involved also

461
00:23:21,650 --> 00:23:31,070
in cognition memory it's not just an

462
00:23:25,839 --> 00:23:32,899
idling rhythm that is is a measure of

463
00:23:31,069 --> 00:23:35,379
inactivity which is sort of the

464
00:23:32,900 --> 00:23:38,059
conventional view of looking at it so

465
00:23:35,380 --> 00:23:40,669
interestingly I heard a healer many

466
00:23:38,058 --> 00:23:42,470
years ago before I did any of this who

467
00:23:40,669 --> 00:23:44,990
was a chiropractor who would work on a

468
00:23:42,470 --> 00:23:49,460
group of people and he said oh it's all

469
00:23:44,990 --> 00:23:52,700
it's all happening in the alpha band you

470
00:23:49,460 --> 00:23:55,579
know and I I thought how does he know

471
00:23:52,700 --> 00:24:00,100
that you know has he tested that and so

472
00:23:55,579 --> 00:24:00,099
I was right you know

473
00:24:01,430 --> 00:24:10,930
[Applause]

474
00:24:03,750 --> 00:24:10,930
[Music]