

1
00:00:00,000 --> 00:00:04,859
yeah so he goes back he does the third

2
00:00:02,638 --> 00:00:07,830
series d here and he's back on the

3
00:00:04,859 --> 00:00:10,830
bandwagon here are the various

4
00:00:07,830 --> 00:00:15,089
combinations now what happened in series

5
00:00:10,830 --> 00:00:17,759
d is not a trivial issue here we'll talk

6
00:00:15,089 --> 00:00:20,670
about that again in just a moment if you

7
00:00:17,760 --> 00:00:23,429
want to have another index on this thing

8
00:00:20,670 --> 00:00:28,320
let me show you what happens if you do

9
00:00:23,429 --> 00:00:31,920
the individual highs distribution versus

10
00:00:28,320 --> 00:00:34,140
the individual low distribution appears

11
00:00:31,920 --> 00:00:36,600
the time of flight of the robot for all

12
00:00:34,140 --> 00:00:38,670
of the long intention trials look at

13
00:00:36,600 --> 00:00:41,120
that distribution of immeasurable

14
00:00:38,670 --> 00:00:43,379
dragged way out a high number is

15
00:00:41,119 --> 00:00:46,049
reasonably flat in here at the

16
00:00:43,378 --> 00:00:48,718
intermediate numbers whereas the times

17
00:00:46,049 --> 00:00:50,849
the flight the short intention thing got

18
00:00:48,719 --> 00:00:53,550
a totally different distribution look at

19
00:00:50,850 --> 00:00:57,510
the major categorical difference between

20
00:00:53,549 --> 00:01:02,189
those efforts all done on the same piece

21
00:00:57,509 --> 00:01:06,179
of klutzy equipment okay now what do we

22
00:01:02,189 --> 00:01:09,420
get out of this well first of all we've

23
00:01:06,180 --> 00:01:12,720
seen a lot of it before this funny

24
00:01:09,420 --> 00:01:17,310
behavior of that second series of that

25
00:01:12,719 --> 00:01:19,500
operator fits right in with our immense

26
00:01:17,310 --> 00:01:22,590
body of data that we put into what we

27
00:01:19,500 --> 00:01:24,688
call a serial position phenomena where

28
00:01:22,590 --> 00:01:27,840
operators come into the laboratory they

29

00:01:24,688 --> 00:01:30,839
do fine on their first exposure they say

30
00:01:27,840 --> 00:01:33,719
I got the hang of this come back he do

31
00:01:30,840 --> 00:01:37,140
his second one as Ali it goes backwards

32
00:01:33,719 --> 00:01:38,938
okay and then then humility sets in we

33
00:01:37,140 --> 00:01:40,560
come back and we try again and we get

34
00:01:38,938 --> 00:01:44,489
back on the current we've seen that many

35
00:01:40,560 --> 00:01:46,500
times so we are seeing once again let's

36
00:01:44,489 --> 00:01:50,269
get a kroger back we're seeing once

37
00:01:46,500 --> 00:01:55,310
again a severe surreal position effect

38
00:01:50,269 --> 00:01:58,560
look at the absolute numbers those

39
00:01:55,310 --> 00:02:00,600
z-scores probabilities there of the

40
00:01:58,560 --> 00:02:03,930
effect sizes are all way out there

41
00:02:00,599 --> 00:02:06,780
there's nothing in the middle here you

42
00:02:03,930 --> 00:02:09,989
do it you do a chi-squared analysis on

43
00:02:06,780 --> 00:02:12,900

listen you're off the off the screen in

44

00:02:09,989 --> 00:02:13,710

terms of something happening when the

45

00:02:12,900 --> 00:02:17,879

operator

46

00:02:13,710 --> 00:02:22,700

interacts with the device now if we

47

00:02:17,879 --> 00:02:26,699

penalize the concatenations with that

48

00:02:22,699 --> 00:02:28,829

series position reversal the composite

49

00:02:26,699 --> 00:02:32,129

scores are much less impressive look at

50

00:02:28,830 --> 00:02:35,640

all of the X plus y trials look at just

51

00:02:32,129 --> 00:02:37,889

the lie trials alone that last block

52

00:02:35,639 --> 00:02:40,189

down there incidentally the calibrations

53

00:02:37,889 --> 00:02:42,809

the machine was continuing to calibrate

54

00:02:40,189 --> 00:02:48,180

perfectly well while all of this was

55

00:02:42,810 --> 00:02:50,310

going on look though as I say at the at

56

00:02:48,180 --> 00:02:53,510

the distribution of those things they're

57

00:02:50,310 --> 00:02:57,500

all out here somewhere in the in the

58
00:02:53,509 --> 00:03:00,359
vague vicinity of our arbitrary point 05

59
00:02:57,500 --> 00:03:03,569
criterion again nothing in the middle

60
00:03:00,360 --> 00:03:06,690
and this of course we have seen so many

61
00:03:03,569 --> 00:03:09,329
times how many of our data we can look

62
00:03:06,689 --> 00:03:12,030
at and say gee we got almost up the

63
00:03:09,330 --> 00:03:16,080
point 05 we got a little bit past point

64
00:03:12,030 --> 00:03:19,259
of a fly that is a magnet that attracts

65
00:03:16,080 --> 00:03:23,400
results all of our experiments and it

66
00:03:19,259 --> 00:03:26,099
worked again here one can go on and

67
00:03:23,400 --> 00:03:28,819
speculate now about what the message to

68
00:03:26,099 --> 00:03:32,519
take away from this little experiment

69
00:03:28,819 --> 00:03:36,169
but as brenda has suggested to made to

70
00:03:32,520 --> 00:03:41,910
mention this program began with a simple

71
00:03:36,169 --> 00:03:45,779
student experiment back in 1978 ok a

72
00:03:41,909 --> 00:03:48,810
little re g breadboard re g klutzy

73
00:03:45,780 --> 00:03:52,020
experiment nonetheless produced striking

74
00:03:48,810 --> 00:03:54,560
results that drove us to do it a little

75
00:03:52,020 --> 00:03:58,530
better fashion for the next 30 years

76
00:03:54,560 --> 00:04:03,750
somehow it's appropriate that this

77
00:03:58,530 --> 00:04:06,569
program ended with a student doing again

78
00:04:03,750 --> 00:04:09,780
a little klutzy experiment getting an

79
00:04:06,569 --> 00:04:11,849
outstanding result i leave those

80
00:04:09,780 --> 00:04:14,030
messages with you be glad to try to

81
00:04:11,849 --> 00:04:18,199
answer any questions but thank you for

82
00:04:14,030 --> 00:04:18,199
closing all a front

83
00:04:21,750 --> 00:04:29,978
um there's there was a series of

84
00:04:26,889 --> 00:04:33,100
experiments run by someone named Renee

85
00:04:29,978 --> 00:04:36,189
pay occu the doctor in France back in

86

00:04:33,100 --> 00:04:38,590
the 70s I think anyway there were

87
00:04:36,189 --> 00:04:42,600
reminiscent of this but with chicks they

88
00:04:38,589 --> 00:04:47,049
were conditioned chicks conditioned to

89
00:04:42,600 --> 00:04:53,379
to feel attracted to this robot the

90
00:04:47,050 --> 00:04:55,900
robot was driven by a random event

91
00:04:53,379 --> 00:04:58,899
generator but it was actually by at

92
00:04:55,899 --> 00:05:02,668
eight result from the random event

93
00:04:58,899 --> 00:05:06,899
generator a run was done in the past and

94
00:05:02,668 --> 00:05:09,339
they found it you know breaks prongs

95
00:05:06,899 --> 00:05:11,769
significant correlation there that the

96
00:05:09,339 --> 00:05:14,560
chicks just by their intention allottee

97
00:05:11,769 --> 00:05:17,259
of being attracted to the robot caused

98
00:05:14,560 --> 00:05:19,750
the robot to come to them in its random

99
00:05:17,259 --> 00:05:23,560
walk and so it's not just a human

100
00:05:19,750 --> 00:05:26,529

affected say it seems to be conscious

101

00:05:23,560 --> 00:05:29,350

intention from some living being would

102

00:05:26,529 --> 00:05:32,888

not necessarily human and i read that

103

00:05:29,350 --> 00:05:36,430

also that this was demonstrated in a

104

00:05:32,889 --> 00:05:40,569

retro causal way with random that

105

00:05:36,430 --> 00:05:42,728

generator number sequences generated in

106

00:05:40,569 --> 00:05:44,918

the past so that methods had to be a

107

00:05:42,728 --> 00:05:47,050

retro causal effect so I just thought

108

00:05:44,918 --> 00:05:49,899

I'd comment on that because it relates

109

00:05:47,050 --> 00:05:51,939

in a pay aquas the close friend and

110

00:05:49,899 --> 00:05:54,009

colleague of ours actually we had the

111

00:05:51,939 --> 00:05:56,978

privilege of interacting with him at the

112

00:05:54,009 --> 00:05:59,788

time he was doing the experiments he was

113

00:05:56,978 --> 00:06:02,639

sponsored by a common sponsor of

114

00:05:59,788 --> 00:06:05,168

programs in this area and what not and

115
00:06:02,639 --> 00:06:07,598
that fairest thing to say is that he

116
00:06:05,168 --> 00:06:10,959
stimulated our interest in a robotic

117
00:06:07,598 --> 00:06:13,810
experiments we pattern the original

118
00:06:10,959 --> 00:06:15,848
studies off of his work and so on so

119
00:06:13,810 --> 00:06:18,759
we're well aware of that those are great

120
00:06:15,848 --> 00:06:19,959
great events but I think you might want

121
00:06:18,759 --> 00:06:23,348
the thing forward though are the

122
00:06:19,959 --> 00:06:26,379
implications here you know we can now go

123
00:06:23,348 --> 00:06:27,128
out and buy robots to clean our living

124
00:06:26,379 --> 00:06:30,278
room

125
00:06:27,129 --> 00:06:33,759
can get robots watering our lawn we have

126
00:06:30,278 --> 00:06:37,300
robots doing sensitive things in nuclear

127
00:06:33,759 --> 00:06:40,838
power plants and so on but robotics has

128
00:06:37,300 --> 00:06:43,239
now entered in a very heavy duty way the

129
00:06:40,838 --> 00:06:45,038
medical profession there's a good chance

130
00:06:43,238 --> 00:06:48,128
that some of you here are going to wind

131
00:06:45,038 --> 00:06:51,188
up on an operating table someday the

132
00:06:48,129 --> 00:06:54,338
little miniaturized robot running around

133
00:06:51,189 --> 00:06:56,769
inside of you in an artery repairing our

134
00:06:54,338 --> 00:06:58,629
heart valve or in your intestine that's

135
00:06:56,769 --> 00:07:01,598
doing some sort of call on us but I

136
00:06:58,629 --> 00:07:03,759
don't know but these robots these

137
00:07:01,598 --> 00:07:06,718
miniature robots in the wall of random

138
00:07:03,759 --> 00:07:09,939
elements and they certainly involve

139
00:07:06,718 --> 00:07:13,509
resonance with their operators they

140
00:07:09,939 --> 00:07:16,349
certainly involve an intention maybe we

141
00:07:13,509 --> 00:07:20,079
ought to be taking a look about the

142
00:07:16,348 --> 00:07:23,098
communication between between physician

143

00:07:20,079 --> 00:07:26,098
and robot or between patient and robot

144
00:07:23,098 --> 00:07:30,128
going forward in this business and think

145
00:07:26,098 --> 00:07:32,639
John may even mention that sly LaRon is

146
00:07:30,129 --> 00:07:35,759
going to get into the Nano robot

147
00:07:32,639 --> 00:07:39,009
business and see if we can indeed in

148
00:07:35,759 --> 00:07:41,709
basic experiments to be sure demonstrate

149
00:07:39,009 --> 00:07:44,439
that they are vulnerable and maybe we

150
00:07:41,709 --> 00:07:50,918
can even make better use of them if we

151
00:07:44,439 --> 00:07:54,968
implement this this dialog thank you Bob

152
00:07:50,918 --> 00:08:00,878
there is one more and this will we only

153
00:07:54,968 --> 00:08:03,308
have time for one more question in in

154
00:08:00,879 --> 00:08:05,949
nine eleven 2001 I heard there was an a

155
00:08:03,309 --> 00:08:08,829
random number experiment that happened

156
00:08:05,949 --> 00:08:12,788
as showing random number changes right

157
00:08:08,829 --> 00:08:14,228

before nine eleven 2001 are you aware of

158

00:08:12,788 --> 00:08:16,658

that experiment were you part you're

159

00:08:14,228 --> 00:08:19,178

about to hear from it I her about it

160

00:08:16,658 --> 00:08:22,538

from Roger and it's talk and we are

161

00:08:19,178 --> 00:08:24,339

certainly all aware of it thank you Bob

162

00:08:22,538 --> 00:08:27,000

that crook

163

00:08:24,339 --> 00:08:27,000

get this