WEBVTT

NOTE duration:"01:22:52"

NOTE recognizability:0.772

NOTE language:en-us

NOTE Confidence: 0.815826652307692

00:00:00.000 --> 00:00:02.863 Right. That was less difficulty with the

NOTE Confidence: 0.815826652307692

00:00:02.863 --> 00:00:05.198 technical aspects than I was expecting.

NOTE Confidence: 0.815826652307692

00:00:05.200 --> 00:00:10.627 So it's great to see everyone this is our.

NOTE Confidence: 0.815826652307692

00:00:10.630 --> 00:00:14.138 Restarted sent monthly seminar

NOTE Confidence: 0.815826652307692

00:00:14.138 --> 00:00:16.769 in psychedelic science,

NOTE Confidence: 0.815826652307692

00:00:16.770 --> 00:00:20.249 which we plan to continue to have

NOTE Confidence: 0.815826652307692

00:00:20.249 --> 00:00:22.888 every third Friday at 3:30 PM.

NOTE Confidence: 0.815826652307692

00:00:22.890 --> 00:00:24.820 We're going to do it hybrid as we are today.

NOTE Confidence: 0.815826652307692

00:00:24.820 --> 00:00:26.932 We've got a small number of people here

NOTE Confidence: 0.815826652307692

00:00:26.932 --> 00:00:29.124 in the room and a lot more on zoom,

NOTE Confidence: 0.815826652307692

00:00:29.130 --> 00:00:30.570 so it's great to see such a large group,

NOTE Confidence: 0.815826652307692

00:00:30.570 --> 00:00:32.383 and we'll continue to have it available

NOTE Confidence: 0.815826652307692

00:00:32.383 --> 00:00:34.194 in both formats if we can continue

NOTE Confidence: 0.815826652307692

00:00:34.194 --> 00:00:35.664 to make the technical stuff work.

NOTE Confidence: 0.815826652307692

00:00:35.670 --> 00:00:36.936 We do promise coffee and cookies

NOTE Confidence: 0.815826652307692

00:00:36.936 --> 00:00:39.292 if you come in person, so. Umm.

NOTE Confidence: 0.815826652307692

00:00:39.292 --> 00:00:43.289 So our presenter today is Lucy Berkovich,

NOTE Confidence: 0.815826652307692

00:00:43.290 --> 00:00:46.328 who's a postdoc in Allen Antiche lab.

NOTE Confidence: 0.815826652307692

00:00:46.330 --> 00:00:48.605 And she's in the early stages of

NOTE Confidence: 0.815826652307692

00:00:48.605 --> 00:00:50.435 putting together a very exciting

NOTE Confidence: 0.815826652307692

00:00:50.435 --> 00:00:52.805 study looking at the brain effects

NOTE Confidence: 0.815826652307692

00:00:52.805 --> 00:00:54.489 of psilocybin and ketamine.

NOTE Confidence: 0.815826652307692

00:00:54.490 --> 00:00:55.617 But what I've asked you to do

NOTE Confidence: 0.815826652307692

00:00:55.617 --> 00:00:56.909 is sort of a broader overview.

NOTE Confidence: 0.815826652307692

00:00:56.910 --> 00:00:58.030 I hope you'll talk about some of

NOTE Confidence: 0.815826652307692

00:00:58.030 --> 00:00:59.129 your own plans in your own work,

NOTE Confidence: 0.815826652307692

00:00:59.130 --> 00:01:01.418 but also a broader overview of the effects

NOTE Confidence: 0.815826652307692

00:01:01.418 --> 00:01:03.538 that the brain imaging literature and

NOTE Confidence: 0.815826652307692

00:01:03.538 --> 00:01:06.670 the effects of these substances on the brain.

NOTE Confidence: 0.815826652307692

00:01:06.670 --> 00:01:07.510 So Lucy,

NOTE Confidence: 0.815826652307692

00:01:07.510 --> 00:01:08.665 thank you so much for being here.

NOTE Confidence: 0.815826652307692

00:01:08.670 --> 00:01:10.174 It's great to have you join us and

NOTE Confidence: 0.815826652307692

00:01:10.174 --> 00:01:11.249 really looking forward to learn.

NOTE Confidence: 0.894377060769231

00:01:12.670 --> 00:01:14.693 Hi. Yeah, I'm very, I'm very glad

NOTE Confidence: 0.894377060769231

00:01:14.693 --> 00:01:16.640 to have been invited and I'm,

NOTE Confidence: 0.894377060769231

00:01:16.640 --> 00:01:19.286 I'm really happy in fact to

NOTE Confidence: 0.894377060769231

00:01:19.286 --> 00:01:21.840 to give this presentation. So

NOTE Confidence: 0.76030082

00:01:21.910 --> 00:01:24.346 I'm sorry, I did just realize,

NOTE Confidence: 0.76030082

00:01:24.350 --> 00:01:26.390 so just two housekeeping things.

NOTE Confidence: 0.76030082

00:01:26.390 --> 00:01:28.100 First of all, this is being

NOTE Confidence: 0.76030082

00:01:28.100 --> 00:01:29.240 recorded and eventually our

NOTE Confidence: 0.76030082

00:01:29.299 --> 00:01:30.909 plan is to post on the website.

NOTE Confidence: 0.76030082

00:01:30.910 --> 00:01:33.014 So just be aware that that that this

NOTE Confidence: 0.76030082

00:01:33.014 --> 00:01:35.187 is being recorded and second of all,

NOTE Confidence: 0.76030082

00:01:35.190 --> 00:01:37.031 in order to avoid the feedback we've

NOTE Confidence: 0.76030082

00:01:37.031 --> 00:01:39.482 turned off the speakers, which means

NOTE Confidence: 0.76030082

00:01:39.482 --> 00:01:42.556 we cannot hear people who are here.

NOTE Confidence: 0.76030082

00:01:42.556 --> 00:01:43.866 With this virtually we can

NOTE Confidence: 0.76030082

00:01:43.866 --> 00:01:45.450 try to figure out how to,

NOTE Confidence: 0.76030082

00:01:45.450 --> 00:01:46.577 I'll see if I can figure out

NOTE Confidence: 0.76030082

00:01:46.577 --> 00:01:47.788 how to make that work better.

NOTE Confidence: 0.76030082

00:01:47.790 --> 00:01:49.338 But yeah, if you're here virtually

NOTE Confidence: 0.76030082

00:01:49.338 --> 00:01:50.990 and you want to contribute,

NOTE Confidence: 0.76030082

00:01:50.990 --> 00:01:52.630 please raise your hand and

NOTE Confidence: 0.76030082

00:01:52.630 --> 00:01:53.942 or right into that.

NOTE Confidence: 0.76030082

00:01:53.950 --> 00:01:55.390 And I will try to keep an eye on the

NOTE Confidence: 0.76030082

00:01:55.430 --> 00:01:56.949 chat as the conference is going along.

NOTE Confidence: 0.76030082

00:01:56.950 --> 00:01:57.946 But if you just call out,

NOTE Confidence: 0.76030082

00:01:57.950 --> 00:02:00.110 I don't think we're going to hear you.

NOTE Confidence: 0.76030082

00:02:00.110 --> 00:02:00.518 All right.

NOTE Confidence: 0.76030082

00:02:00.518 --> 00:02:02.150 That's the last housekeeping I can think of.

NOTE Confidence: 0.76030082

00:02:02.150 --> 00:02:02.978 So go ahead.

NOTE Confidence: 0.843554086

00:02:04.950 --> 00:02:06.786 Well, so yes, so thank you

NOTE Confidence: 0.843554086

00:02:06.786 --> 00:02:08.010 for for this invitation.

NOTE Confidence: 0.843554086

00:02:08.010 --> 00:02:10.402 So in fact, I really try to provide

NOTE Confidence: 0.843554086

00:02:10.402 --> 00:02:12.569 an overview of the neuroimaging

NOTE Confidence: 0.843554086

00:02:12.569 --> 00:02:14.066 studies about psychedelics.

NOTE Confidence: 0.843554086

00:02:14.070 --> 00:02:16.158 So I decided not to focus

NOTE Confidence: 0.843554086

00:02:16.158 --> 00:02:17.550 on on psychedelic process.

NOTE Confidence: 0.843554086

00:02:17.550 --> 00:02:19.167 So I will not really address the

NOTE Confidence: 0.843554086

00:02:19.167 --> 00:02:20.390 ketamine aspect, but I would be

NOTE Confidence: 0.843554086

00:02:20.390 --> 00:02:21.750 really happy to talk about it too.

NOTE Confidence: 0.843554086

00:02:21.750 --> 00:02:23.559 And and I mean I can have a couple

NOTE Confidence: 0.843554086

00:02:23.559 --> 00:02:25.567 of slides on that also if you need.

NOTE Confidence: 0.843554086

00:02:25.570 --> 00:02:28.606 So just to provide like first,

NOTE Confidence: 0.843554086

00:02:28.610 --> 00:02:31.088 first of all maybe a few definitions,

NOTE Confidence: 0.843554086

00:02:31.090 --> 00:02:33.568 so everybody here I guess I

NOTE Confidence: 0.843554086

00:02:33.568 --> 00:02:35.220 know what it's like.

NOTE Confidence: 0.843554086

00:02:35.220 --> 00:02:35.838 But anyway,

NOTE Confidence: 0.843554086

00:02:35.838 --> 00:02:38.310 So what what I will talk about is

NOTE Confidence: 0.843554086

00:02:38.382 --> 00:02:41.119 uh psylocybe which is the the active

NOTE Confidence: 0.843554086

00:02:41.119 --> 00:02:43.470 compound of matching magic mushrooms,

NOTE Confidence: 0.843554086

00:02:43.470 --> 00:02:47.022 LSD DMT which is one of the chemical

NOTE Confidence: 0.843554086

00:02:47.022 --> 00:02:50.318 compound of iasca and also mescaline.

NOTE Confidence: 0.843554086

00:02:50.320 --> 00:02:51.454 But you will see that there

NOTE Confidence: 0.843554086

00:02:51.454 --> 00:02:52.849 is not in fact many studies,

NOTE Confidence: 0.843554086

00:02:52.850 --> 00:02:56.196 many neural imaging study about the Muslim.

NOTE Confidence: 0.843554086

00:02:56.200 --> 00:02:59.840 So all these molecules are

NOTE Confidence: 0.843554086

00:02:59.840 --> 00:03:01.296 serotonergic agonists,

NOTE Confidence: 0.843554086

00:03:01.300 --> 00:03:03.185 in particular in the vestibular

NOTE Confidence: 0.843554086

00:03:03.185 --> 00:03:04.693 receptors of the serotonin,

NOTE Confidence: 0.843554086

00:03:04.700 --> 00:03:07.580 but also on other receptors.

NOTE Confidence: 0.843554086

00:03:07.580 --> 00:03:10.118 And they have several subjective effects.

NOTE Confidence: 0.843554086

00:03:10.120 --> 00:03:12.730 And in fact This is why they are famous.

NOTE Confidence: 0.843554086

00:03:12.730 --> 00:03:15.808 And in particular they give a

NOTE Confidence: 0.843554086

00:03:15.808 --> 00:03:18.361 visual distortion that like you

NOTE Confidence: 0.843554086

00:03:18.361 --> 00:03:21.196 can see that are kind of moving,

NOTE Confidence: 0.843554086

00:03:21.200 --> 00:03:23.390 moving distortion or the impression

NOTE Confidence: 0.843554086

00:03:23.390 --> 00:03:25.580 that things are breathing or

NOTE Confidence: 0.843554086

00:03:25.655 --> 00:03:27.299 volute things like that.

NOTE Confidence: 0.843554086

00:03:27.300 --> 00:03:29.625 There is also time and

NOTE Confidence: 0.843554086

00:03:29.625 --> 00:03:31.020 space filling alterations,

NOTE Confidence: 0.843554086

00:03:31.020 --> 00:03:34.490 just academics and mystical spiritual

NOTE Confidence: 0.843554086

00:03:34.490 --> 00:03:38.783 experiences that are reported by users.

NOTE Confidence: 0.843554086

00:03:38.783 --> 00:03:42.898 And for all these effects,

NOTE Confidence: 0.843554086

00:03:42.900 --> 00:03:45.084 I've I've shown to also provide

NOTE Confidence: 0.843554086

00:03:45.084 --> 00:03:47.163 kind of promising results in

NOTE Confidence: 0.843554086

00:03:47.163 --> 00:03:48.837 different psychiatric disorders,

NOTE Confidence: 0.843554086

00:03:48.840 --> 00:03:51.460 and in particular in depression,

NOTE Confidence: 0.843554086

00:03:51.460 --> 00:03:52.888 anxiety and addiction.

NOTE Confidence: 0.843554086

00:03:52.888 --> 00:03:56.220 So all of this brings the question

NOTE Confidence: 0.843554086

00:03:56.310 --> 00:03:59.705 about brain mechanism and in fact how

NOTE Confidence: 0.843554086

00:03:59.705 --> 00:04:02.231 this brain mechanism can account for

NOTE Confidence: 0.843554086

00:04:02.231 --> 00:04:04.016 both these changes in perception,

NOTE Confidence: 0.843554086

00:04:04.020 --> 00:04:06.680 but also the therapeutic effects

NOTE Confidence: 0.843554086

00:04:06.680 --> 00:04:08.276 of these molecules.

NOTE Confidence: 0.843554086

00:04:08.280 --> 00:04:10.616 So first I will try to travel from

NOTE Confidence: 0.843554086

00:04:10.616 --> 00:04:12.460 the receptors to the brain effect

NOTE Confidence: 0.843554086

00:04:12.460 --> 00:04:14.764 and then to the cognitive and the

NOTE Confidence: 0.843554086

00:04:14.764 --> 00:04:16.999 theoretical aspects of the psychedelics.

NOTE Confidence: 0.843554086

00:04:17.000 --> 00:04:18.864 So regarding the receptors,

NOTE Confidence: 0.843554086

00:04:18.864 --> 00:04:21.660 maybe the first question is where

NOTE Confidence: 0.843554086

00:04:21.743 --> 00:04:24.417 are the 5-2 receptors in the brain?

NOTE Confidence: 0.843554086

00:04:24.420 --> 00:04:26.660 And in fact, as you can see here,

NOTE Confidence: 0.843554086

00:04:26.660 --> 00:04:28.300 I don't know if you can see my my mind,

NOTE Confidence: 0.843554086

00:04:28.300 --> 00:04:29.896 so I don't, I'm not sure.

NOTE Confidence: 0.843554086

00:04:29.900 --> 00:04:33.292 But you can see that they are quite

NOTE Confidence: 0.843554086

00:04:33.292 --> 00:04:35.529 broadly distributed across the brain

NOTE Confidence: 0.843554086

00:04:35.529 --> 00:04:38.860 and in particular they are located in.

NOTE Confidence: 0.843554086

00:04:38.860 --> 00:04:40.880 Region that corresponds to

NOTE Confidence: 0.843554086

00:04:40.880 --> 00:04:43.411 some important networks and in

NOTE Confidence: 0.843554086

00:04:43.411 --> 00:04:45.811 particular the default mode network

NOTE Confidence: 0.843554086

00:04:45.811 --> 00:04:48.649 and the task positive network.

NOTE Confidence: 0.843554086

00:04:48.650 --> 00:04:51.805 And these two networks are

NOTE Confidence: 0.843554086

00:04:51.805 --> 00:04:53.067 supposedly anticorrelated.

NOTE Confidence: 0.843554086

00:04:53.070 --> 00:04:54.990 The first one activate when you're

NOTE Confidence: 0.843554086

00:04:54.990 --> 00:04:57.216 doing nothing and the other one will

NOTE Confidence: 0.843554086

00:04:57.216 --> 00:05:00.144 activate when you are involved in the task.

NOTE Confidence: 0.843554086

00:05:00.150 --> 00:05:02.208 I just also highlighted on the

NOTE Confidence: 0.843554086

00:05:02.208 --> 00:05:04.344 left the five HT 1A receptor

NOTE Confidence: 0.843554086

00:05:04.344 --> 00:05:06.745 that is located more on the the

NOTE Confidence: 0.843554086

00:05:06.745 --> 00:05:08.698 the medial temporal lobe.

NOTE Confidence: 0.843554086

00:05:08.700 --> 00:05:10.156 And particularly the hippocampus,

NOTE Confidence: 0.843554086

00:05:10.156 --> 00:05:12.755 because there is more a kind of

NOTE Confidence: 0.843554086

00:05:12.755 --> 00:05:14.867 inhibitory effect of this receptor that

NOTE Confidence: 0.843554086

00:05:14.867 --> 00:05:16.929 is also activated by psychedelics.

NOTE Confidence: 0.91883033

00:05:19.580 --> 00:05:23.234 So what happens now when we activate

NOTE Confidence: 0.91883033

00:05:23.234 --> 00:05:25.600 this literary receptors in the brain?

NOTE Confidence: 0.91883033

00:05:25.600 --> 00:05:28.147 So here you can see a kind of schematic

NOTE Confidence: 0.91883033

00:05:28.147 --> 00:05:30.558 of different action of the psychedelic

NOTE Confidence: 0.91883033

00:05:30.558 --> 00:05:33.175 and we're going to review this

NOTE Confidence: 0.91883033

00:05:33.175 --> 00:05:36.091 progressively because it's kind of a

NOTE Confidence: 0.91883033

00:05:36.091 --> 00:05:37.874 complex complicated schematic, right.

NOTE Confidence: 0.91883033

00:05:37.874 --> 00:05:40.790 So here you can see the LSD on the

NOTE Confidence: 0.91883033

00:05:40.869 --> 00:05:43.851 left and on like the red receptors

NOTE Confidence: 0.91883033

00:05:43.851 --> 00:05:46.480 are the furnishings where receptors,

NOTE Confidence: 0.91883033

00:05:46.480 --> 00:05:47.920 so this LSD, but it's supposed

NOTE Confidence: 0.91883033

00:05:47.920 --> 00:05:49.788 to be the same with the others.

NOTE Confidence: 0.91883033

00:05:49.790 --> 00:05:51.758 Catholics will activate these

NOTE Confidence: 0.91883033

00:05:51.758 --> 00:05:54.710 pyramidal neurons that you can see

NOTE Confidence: 0.91883033

00:05:54.796 --> 00:05:57.982 here in layer 5 and layer six of the

NOTE Confidence: 0.91883033

00:05:57.982 --> 00:06:00.108 preferred the prefrontal cortex.

NOTE Confidence: 0.91883033

00:06:00.110 --> 00:06:03.110 So there will be a huge activation of

NOTE Confidence: 0.91883033

00:06:03.110 --> 00:06:06.070 these neuron just by a direct effect

NOTE Confidence: 0.91883033

00:06:06.070 --> 00:06:08.205 on the fiber structure receptors.

NOTE Confidence: 0.91883033

00:06:08.210 --> 00:06:11.185 There will be also an activation of

NOTE Confidence: 0.91883033

00:06:11.185 --> 00:06:13.424 these neurons through the appearance

NOTE Confidence: 0.91883033

00:06:13.424 --> 00:06:16.504 from other brain areas and in particular

NOTE Confidence: 0.91883033

00:06:16.504 --> 00:06:19.418 the telemus that also have these

NOTE Confidence: 0.91883033

00:06:19.418 --> 00:06:21.808 village tutorial receptors and this

NOTE Confidence: 0.91883033

00:06:21.810 --> 00:06:24.253 will result in a glutamate release

NOTE Confidence: 0.91883033

00:06:24.253 --> 00:06:27.511 in the prefrontal cortex still and

NOTE Confidence: 0.91883033

00:06:27.511 --> 00:06:29.695 an increased synaptic plasticity

NOTE Confidence: 0.91883033

00:06:29.695 --> 00:06:32.030 and you will see that.

NOTE Confidence: 0.91883033

00:06:32.030 --> 00:06:35.698 This is also a very important mechanism.

NOTE Confidence: 0.91883033

00:06:35.700 --> 00:06:37.995 But the father states where

NOTE Confidence: 0.91883033

00:06:37.995 --> 00:06:40.610 receptors are not only located on.

NOTE Confidence: 0.91883033

00:06:40.610 --> 00:06:41.606 Excitatory neurons,

NOTE Confidence: 0.91883033

00:06:41.606 --> 00:06:45.092 but also on inhibitory neurons and in

NOTE Confidence: 0.91883033

00:06:45.092 --> 00:06:47.789 particular these Gabaergic neurons here.

NOTE Confidence: 0.91883033

00:06:47.790 --> 00:06:51.430 And this will inhibit the pyramidal neuron.

NOTE Confidence: 0.91883033

00:06:51.430 --> 00:06:53.761 So there is a kind of balance

NOTE Confidence: 0.91883033

00:06:53.761 --> 00:06:55.222 between excitation and inhibition

NOTE Confidence: 0.91883033

00:06:55.222 --> 00:06:57.959 and there are also internal ones in

NOTE Confidence: 0.91883033

00:06:57.959 --> 00:07:00.297 the prefrontal cortex that would be

NOTE Confidence: 0.91883033

00:07:00.297 --> 00:07:02.529 activated and that will also inhibit,

NOTE Confidence: 0.91883033

00:07:02.530 --> 00:07:06.370 inhibit the the parent domains.

NOTE Confidence: 0.91883033

00:07:06.370 --> 00:07:07.902 But All in all,

NOTE Confidence: 0.91883033

00:07:07.902 --> 00:07:09.817 there is a neural activation

NOTE Confidence: 0.91883033

00:07:09.817 --> 00:07:12.249 of these pyramidal neurons,

NOTE Confidence: 0.91883033

00:07:12.250 --> 00:07:14.105 in particular in the layer of five,

NOTE Confidence: 0.91883033

00:07:14.110 --> 00:07:15.640 the prefrontal cortex,

NOTE Confidence: 0.91883033

00:07:15.640 --> 00:07:19.822 and this will lead to what has been

NOTE Confidence: 0.91883033

00:07:19.822 --> 00:07:22.870 observed as an hyper frontality or hyper

NOTE Confidence: 0.91883033

00:07:22.870 --> 00:07:24.890 activity in the prefrontal cortex.

NOTE Confidence: 0.858121852083333

00:07:27.370 --> 00:07:29.426 OK, so now if we turn to like

NOTE Confidence: 0.858121852083333

00:07:29.426 --> 00:07:31.494 the the brain effect of the

NOTE Confidence: 0.858121852083333

00:07:31.494 --> 00:07:33.708 psychedelics and what what we can

NOTE Confidence: 0.858121852083333

00:07:33.780 --> 00:07:36.008 observe with neuroimaging study.

NOTE Confidence: 0.858121852083333

00:07:36.010 --> 00:07:39.090 First of all there is a new

NOTE Confidence: 0.858121852083333

00:07:39.090 --> 00:07:41.310 state of connectivity at first.

NOTE Confidence: 0.858121852083333

00:07:41.310 --> 00:07:44.382 And this is characterized by a

NOTE Confidence: 0.858121852083333

00:07:44.382 --> 00:07:46.430 decreased within network connectivity.

NOTE Confidence: 0.858121852083333

00:07:46.430 --> 00:07:48.159 So it means that in several network

NOTE Confidence: 0.858121852083333

00:07:48.159 --> 00:07:49.874 you will have less connectivity of

NOTE Confidence: 0.858121852083333

00:07:49.874 --> 00:07:51.409 different parts of this network

NOTE Confidence: 0.858121852083333

00:07:51.409 --> 00:07:53.290 and this is particularly the case

NOTE Confidence: 0.858121852083333

00:07:53.290 --> 00:07:54.800 in the development network and

NOTE Confidence: 0.858121852083333

00:07:54.800 --> 00:07:57.354 here in this study also in the

NOTE Confidence: 0.858121852083333

00:07:57.354 --> 00:07:59.749 auditory network for the silo sibin.

NOTE Confidence: 0.858121852083333

00:07:59.750 --> 00:08:03.178 But we can see pretty much similar effect

NOTE Confidence: 0.858121852083333

00:08:03.178 --> 00:08:05.586 in the different network with LSD here.

NOTE Confidence: 0.858121852083333

00:08:05.590 --> 00:08:08.182 So what is in yellow is just the

NOTE Confidence: 0.858121852083333

00:08:08.182 --> 00:08:10.570 mapping of the the network and in

NOTE Confidence: 0.858121852083333

00:08:10.570 --> 00:08:13.210 blue-green it's the the decrease of

NOTE Confidence: 0.858121852083333

00:08:13.210 --> 00:08:14.970 the within network connectivity.

NOTE Confidence: 0.858121852083333

00:08:14.970 --> 00:08:17.282 You can see here also that in the

NOTE Confidence: 0.858121852083333

00:08:17.282 --> 00:08:19.078 visual network you have decreased

NOTE Confidence: 0.858121852083333

00:08:19.078 --> 00:08:21.388 connectivity and other networks can have

NOTE Confidence: 0.858121852083333

00:08:21.388 --> 00:08:24.068 this decrease within network connectivity.

NOTE Confidence: 0.858121852083333

00:08:24.070 --> 00:08:27.038 And we with AOS here we also have

NOTE Confidence: 0.858121852083333

00:08:27.038 --> 00:08:28.895 this decrease within connectivity

NOTE Confidence: 0.858121852083333

00:08:28.895 --> 00:08:31.865 within the in the different network.

NOTE Confidence: 0.858121852083333

00:08:31.870 --> 00:08:34.582 And you have another result that is not

NOTE Confidence: 0.858121852083333

00:08:34.582 --> 00:08:36.810 really observed with other psychedelics,

NOTE Confidence: 0.858121852083333

00:08:36.810 --> 00:08:39.183 which is an increase this time of

NOTE Confidence: 0.858121852083333

00:08:39.183 --> 00:08:40.756 the within network connectivity

NOTE Confidence: 0.858121852083333

00:08:40.756 --> 00:08:42.688 in the salience network.

NOTE Confidence: 0.858121852083333

00:08:42.690 --> 00:08:44.664 And we'll see that this is this

NOTE Confidence: 0.858121852083333

00:08:44.664 --> 00:08:46.559 belongs to some discrepancies that

NOTE Confidence: 0.858121852083333

00:08:46.559 --> 00:08:49.009 exist between the different molecules.

NOTE Confidence: 0.929674284545455

00:08:52.030 --> 00:08:54.032 On the other hand, there is an

NOTE Confidence: 0.929674284545455

00:08:54.032 --> 00:08:55.610 increased between network connectivity,

NOTE Confidence: 0.929674284545455

00:08:55.610 --> 00:08:58.172 which means that the network one

NOTE Confidence: 0.929674284545455

00:08:58.172 --> 00:09:00.704 with another will be more connected.

NOTE Confidence: 0.929674284545455

00:09:00.710 --> 00:09:03.851 And this can be seen here in this kind

NOTE Confidence: 0.929674284545455

00:09:03.851 --> 00:09:06.722 of metrics that shows the differences

NOTE Confidence: 0.929674284545455

00:09:06.722 --> 00:09:09.470 in fact between silybin and placebo.

NOTE Confidence: 0.929674284545455

00:09:09.470 --> 00:09:11.486 And what you can see in red is all

NOTE Confidence: 0.929674284545455

00:09:11.486 --> 00:09:13.264 the combination of networks that

NOTE Confidence: 0.929674284545455

00:09:13.264 --> 00:09:15.496 are more connected one to another.

NOTE Confidence: 0.929674284545455

00:09:15.500 --> 00:09:18.308 So there is really a kind of huge

NOTE Confidence: 0.929674284545455

00:09:18.308 --> 00:09:20.380 increase across the brain of this.

NOTE Confidence: 0.929674284545455

00:09:20.380 --> 00:09:23.120 Between network and activity.

NOTE Confidence: 0.929674284545455

00:09:23.120 --> 00:09:25.640 And this is also the case under LSD.

NOTE Confidence: 0.929674284545455

00:09:25.640 --> 00:09:28.205 Here in green we can see how these networks

NOTE Confidence: 0.929674284545455

00:09:28.205 --> 00:09:30.589 would be more connected to to each other.

NOTE Confidence: 0.723018794

00:09:32.960 --> 00:09:35.010 Yeah. Are these two effects

NOTE Confidence: 0.840304975714286

00:09:35.020 --> 00:09:38.674 consistent with just an increase in noise?

NOTE Confidence: 0.840304975714286

00:09:38.680 --> 00:09:40.544 So if you just simply increase the noise,

NOTE Confidence: 0.840304975714286

00:09:40.550 --> 00:09:42.180 you're going to decrease the

NOTE Confidence: 0.840304975714286

00:09:42.180 --> 00:09:43.810 coherence within any given network

NOTE Confidence: 0.840304975714286

00:09:43.871 --> 00:09:45.476 that was coherent and baseline.

NOTE Confidence: 0.840304975714286

00:09:45.480 --> 00:09:47.195 You inject noise different less

NOTE Confidence: 0.840304975714286

00:09:47.195 --> 00:09:49.045 code and across networks if the

NOTE Confidence: 0.840304975714286

00:09:49.045 --> 00:09:50.550 networks are distinct in their

NOTE Confidence: 0.840304975714286

00:09:50.603 --> 00:09:52.108 patterns or even anti correlated

NOTE Confidence: 0.840304975714286

00:09:52.108 --> 00:09:54.300 because how we find them through ICA,

NOTE Confidence: 0.840304975714286

00:09:54.300 --> 00:09:57.079 then you're going to lose the anticorrelation

NOTE Confidence: 0.840304975714286

00:09:57.079 --> 00:09:59.499 which may read out as enhanced

NOTE Confidence: 0.840304975714286

00:09:59.499 --> 00:10:01.800 correlation or loss of anticorrelation.

NOTE Confidence: 0.840304975714286

00:10:01.800 --> 00:10:02.457 So all right,

NOTE Confidence: 0.840304975714286

00:10:02.457 --> 00:10:05.029 all it it's easy for me to see how the

NOTE Confidence: 0.840304975714286

00:10:05.029 --> 00:10:06.669 loss of within network connectivity

NOTE Confidence: 0.840304975714286

00:10:06.669 --> 00:10:08.806 could simply be the injection of noise.

NOTE Confidence: 0.840304975714286

00:10:08.810 --> 00:10:10.385 It's less obvious to me whether the

NOTE Confidence: 0.840304975714286

00:10:10.385 --> 00:10:12.038 second fight be increased in between.

NOTE Confidence: 0.840304975714286

00:10:12.040 --> 00:10:13.028 Never could be explained

NOTE Confidence: 0.840304975714286

00:10:13.028 --> 00:10:14.016 by just the injection.

NOTE Confidence: 0.822711560833333

00:10:17.790 --> 00:10:20.310 I I think that the fact that we

NOTE Confidence: 0.822711560833333

00:10:20.310 --> 00:10:22.566 find opposite pattern is like, yeah,

NOTE Confidence: 0.822711560833333

00:10:22.566 --> 00:10:25.134 less incoherence with the idea that

NOTE Confidence: 0.822711560833333

00:10:25.134 --> 00:10:27.867 we will have only a single like

NOTE Confidence: 0.666774305

00:10:27.880 --> 00:10:30.820 these are both relative to base.

NOTE Confidence: 0.666774305

00:10:30.820 --> 00:10:33.046 Find the different networks are non

NOTE Confidence: 0.666774305

00:10:33.046 --> 00:10:34.680 correlated or anticorrelated if not.

NOTE Confidence: 0.821997356428571

00:10:35.570 --> 00:10:36.742 It depends. For example,

NOTE Confidence: 0.821997356428571

00:10:36.742 --> 00:10:38.207 the different network and the

NOTE Confidence: 0.821997356428571

00:10:38.207 --> 00:10:39.728 science or the executive network.

NOTE Confidence: 0.821997356428571

00:10:39.730 --> 00:10:40.914 They are anticorrelated naturally.

NOTE Confidence: 0.821997356428571

00:10:40.914 --> 00:10:42.098 So the fact that

NOTE Confidence: 0.712017028

00:10:42.110 --> 00:10:45.040 there is a correlation between increased.

NOTE Confidence: 0.873659975

00:10:46.610 --> 00:10:48.194 This is the like this is the shortcut

NOTE Confidence: 0.873659975

00:10:48.194 --> 00:10:49.559 that is made in many studies.

NOTE Confidence: 0.873659975

00:10:49.560 --> 00:10:51.624 That diagram, what we called a

NOTE Confidence: 0.873659975

00:10:51.624 --> 00:10:53.554 loss of anticorrelation is an

NOTE Confidence: 0.873659975

00:10:53.554 --> 00:10:55.490 increasing connectivity between them,

NOTE Confidence: 0.740889780909091

00:10:55.530 --> 00:10:56.934 right? Yeah, but that's not true

NOTE Confidence: 0.740889780909091

00:10:56.934 --> 00:10:58.340 with all of these patterns.

NOTE Confidence: 0.849177513571429

00:10:59.870 --> 00:11:01.967 So what you can see here is that for

NOTE Confidence: 0.849177513571429

00:11:01.967 --> 00:11:03.735 between some networks you will have

NOTE Confidence: 0.849177513571429

00:11:03.735 --> 00:11:05.548 an increase but with between some

NOTE Confidence: 0.849177513571429

00:11:05.548 --> 00:11:07.445 other you will have like a decrease.

NOTE Confidence: 0.849177513571429

00:11:07.450 --> 00:11:09.360 I did not detail everything

NOTE Confidence: 0.849177513571429

00:11:09.360 --> 00:11:11.270 because like to cover everything.

NOTE Confidence: 0.849177513571429

00:11:11.270 --> 00:11:13.286 I could not go in every details.

NOTE Confidence: 0.849177513571429

00:11:13.290 --> 00:11:16.476 But indeed in fact the what you

NOTE Confidence: 0.849177513571429

00:11:16.476 --> 00:11:18.107 mentioned is a very important point

NOTE Confidence: 0.849177513571429

00:11:18.107 --> 00:11:20.601 and you will see and we will see for

NOTE Confidence: 0.849177513571429

00:11:20.601 --> 00:11:22.736 instance that what was taken as an

NOTE Confidence: 0.849177513571429

00:11:22.736 --> 00:11:24.786 hyper frontality or an increase in

NOTE Confidence: 0.849177513571429

00:11:24.786 --> 00:11:26.940 general activity in the brain could

NOTE Confidence: 0.849177513571429

00:11:27.009 --> 00:11:29.109 be in fact just related to the.

NOTE Confidence: 0.849177513571429

00:11:29.110 --> 00:11:31.112 Is the child rescue effect of the

NOTE Confidence: 0.849177513571429

00:11:31.112 --> 00:11:33.224 of the drugs and that when you

NOTE Confidence: 0.849177513571429

00:11:33.224 --> 00:11:35.012 when you correct that with for

NOTE Confidence: 0.849177513571429

00:11:35.078 --> 00:11:37.130 example global signal regression,

NOTE Confidence: 0.849177513571429

00:11:37.130 --> 00:11:38.555 you have very different pattern

NOTE Confidence: 0.849177513571429

00:11:38.555 --> 00:11:39.125 of activation.

NOTE Confidence: 0.662840443333333

00:11:42.310 --> 00:11:46.558 Is the increase within salience network

NOTE Confidence: 0.662840443333333

00:11:46.560 --> 00:11:48.704 effect that you showed on the last slide?

NOTE Confidence: 0.6396734

00:11:51.280 --> 00:11:54.508 Since that. By itself like generally

NOTE Confidence: 0.6396734

00:11:54.508 --> 00:11:56.368 to this increasing between network

NOTE Confidence: 0.6396734

00:11:56.368 --> 00:11:58.186 connectivity or is that like an outlier?

NOTE Confidence: 0.906482526

00:11:59.580 --> 00:12:01.460 Yeah, it's uh, something different.

NOTE Confidence: 0.906482526

00:12:01.460 --> 00:12:03.889 It's really the reason connectivity in the

NOTE Confidence: 0.906482526

00:12:03.889 --> 00:12:06.165 salience network and not just because it's

NOTE Confidence: 0.906482526

00:12:06.165 --> 00:12:08.586 connected to all the other. Like, yeah,

NOTE Confidence: 0.906482526

00:12:08.586 --> 00:12:10.824 it's just like an individual pattern.

NOTE Confidence: 0.15324295

00:12:12.950 --> 00:12:16.965 Umm. And so yes, so we're like this

NOTE Confidence: 0.15324295

00:12:16.965 --> 00:12:19.546 is what I was just saying like there

NOTE Confidence: 0.15324295

00:12:19.546 --> 00:12:21.739 is more coupling between the DMN

NOTE Confidence: 0.15324295

00:12:21.739 --> 00:12:23.959 and the task positive network under

NOTE Confidence: 0.15324295

00:12:23.959 --> 00:12:26.309 service saving and under iOS gas.

NOTE Confidence: 0.15324295

00:12:26.309 --> 00:12:29.200 So what you can see here in

NOTE Confidence: 0.15324295

00:12:29.300 --> 00:12:31.070 particular on the.

NOTE Confidence: 0.15324295

00:12:31.070 --> 00:12:32.673 On the bottom right is that when

NOTE Confidence: 0.15324295

00:12:32.673 --> 00:12:34.163 you choose a seed that belong

NOTE Confidence: 0.15324295

00:12:34.163 --> 00:12:35.657 to one of the two networks,

NOTE Confidence: 0.15324295

00:12:35.660 --> 00:12:37.886 you will see like a burst of

NOTE Confidence: 0.15324295

00:12:37.886 --> 00:12:39.929 activity on the other network.

NOTE Confidence: 0.15324295

00:12:39.930 --> 00:12:41.930 So it's also probably region

NOTE Confidence: 0.15324295

00:12:41.930 --> 00:12:43.930 dependent and some some parts

NOTE Confidence: 0.15324295

00:12:43.999 --> 00:12:46.027 of each of these network can

NOTE Confidence: 0.15324295

00:12:46.027 --> 00:12:48.000 be more connected to another.

NOTE Confidence: 0.15324295

00:12:48.000 --> 00:12:48.310 Yeah.

NOTE Confidence: 0.27902532

00:12:51.050 --> 00:12:54.402 Umm. So what we can see also during

NOTE Confidence: 0.27902532

00:12:54.402 --> 00:12:56.873 rest is a reduced associative but an

NOTE Confidence: 0.27902532

00:12:56.873 --> 00:12:58.998 increased sensory brain wide connectivity

NOTE Confidence: 0.27902532

00:12:58.998 --> 00:13:01.366 and this is what I was mentioning

NOTE Confidence: 0.27902532

00:13:01.366 --> 00:13:03.032 after our global senior regression.

NOTE Confidence: 0.27902532

00:13:03.032 --> 00:13:06.328 So you can see that for sale saving

NOTE Confidence: 0.27902532

00:13:06.328 --> 00:13:09.848 in this study with this increase in

NOTE Confidence: 0.27902532

00:13:09.848 --> 00:13:12.360 the particularity of capital area.

NOTE Confidence: 0.27902532

00:13:12.360 --> 00:13:14.145 And a decrease in the frontal area

NOTE Confidence: 0.27902532

00:13:14.145 --> 00:13:16.244 and you can and you have kind of

NOTE Confidence: 0.27902532

00:13:16.244 --> 00:13:17.872 a similar pattern that is quite

NOTE Confidence: 0.27902532

00:13:17.872 --> 00:13:19.930 striking how these two are are are

NOTE Confidence: 0.27902532

00:13:19.930 --> 00:13:22.610 really close to another with the very

NOTE Confidence: 0.27902532

00:13:22.610 --> 00:13:24.700 same increasing the exhibitor area,

NOTE Confidence: 0.27902532

00:13:24.700 --> 00:13:27.388 decrease in frontal and in this case

NOTE Confidence: 0.27902532

00:13:27.388 --> 00:13:29.084 also the somatomotor cortex that

NOTE Confidence: 0.27902532

00:13:29.084 --> 00:13:30.988 is also that has also an increased

NOTE Confidence: 0.27902532

00:13:30.988 --> 00:13:32.560 connectivity with the rest of the brain.

NOTE Confidence: 0.783622192222222

00:13:35.450 --> 00:13:38.341 Umm, the telem, the Telemus is also

NOTE Confidence: 0.783622192222222

00:13:38.341 --> 00:13:41.037 more connected to other areas and

NOTE Confidence: 0.783622192222222

00:13:41.037 --> 00:13:43.327 in particular to sensory areas.

NOTE Confidence: 0.783622192222222

00:13:43.330 --> 00:13:44.968 So there is a bit small,

NOTE Confidence: 0.783622192222222

00:13:44.970 --> 00:13:47.562 but what you can see here is that in

NOTE Confidence: 0.783622192222222

00:13:47.562 --> 00:13:51.034 this kind of ring graph is all the

NOTE Confidence: 0.783622192222222

00:13:51.034 --> 00:13:54.050 red lines corresponds to an increase

NOTE Confidence: 0.783622192222222

00:13:54.050 --> 00:13:56.566 in connectivity and it's and there

NOTE Confidence: 0.783622192222222

00:13:56.566 --> 00:13:58.512 is an increase that is kind of

NOTE Confidence: 0.783622192222222

00:13:58.512 --> 00:14:00.684 specific to the to the sensory areas

NOTE Confidence: 0.783622192222222

00:14:00.684 --> 00:14:02.310 compared to the associated areas.

NOTE Confidence: 0.609355668

00:14:04.840 --> 00:14:07.810 And finally, under iOS card,

NOTE Confidence: 0.609355668

00:14:07.810 --> 00:14:09.940 there is an increase of coupling

NOTE Confidence: 0.609355668

00:14:09.940 --> 00:14:11.868 between the visual area and

NOTE Confidence: 0.609355668

00:14:11.868 --> 00:14:13.200 the development network.

NOTE Confidence: 0.609355668

00:14:13.200 --> 00:14:13.952 But interestingly,

NOTE Confidence: 0.609355668

00:14:13.952 --> 00:14:16.960 I mean even if it's also like a

NOTE Confidence: 0.609355668

00:14:17.037 --> 00:14:19.815 correlate of what I presented before,

NOTE Confidence: 0.609355668

00:14:19.820 --> 00:14:21.512 there is a decreased coupling between

NOTE Confidence: 0.609355668

00:14:21.512 --> 00:14:23.799 the visual and the task positive network.

NOTE Confidence: 0.609355668

00:14:23.800 --> 00:14:26.054 And in this study the salience network

NOTE Confidence: 0.609355668

00:14:26.054 --> 00:14:28.260 has an increased within connectivity.

NOTE Confidence: 0.609355668

00:14:28.260 --> 00:14:29.540 So it may be related.

NOTE Confidence: 0.75955571625

00:14:32.390 --> 00:14:33.462 So under Iowa schedule,

NOTE Confidence: 0.75955571625

00:14:33.462 --> 00:14:35.070 I think that are quite specific

NOTE Confidence: 0.75955571625

00:14:35.128 --> 00:14:36.790 and in particular there are there,

NOTE Confidence: 0.75955571625

00:14:36.790 --> 00:14:39.618 there are changes in visual areas that

NOTE Confidence: 0.75955571625

00:14:39.618 --> 00:14:42.457 really look like visual stimulation even

NOTE Confidence: 0.75955571625

00:14:42.457 --> 00:14:45.547 if participants have their eyes closed.

NOTE Confidence: 0.75955571625

00:14:45.550 --> 00:14:47.726 So this is what you can see here.

NOTE Confidence: 0.75955571625

00:14:47.730 --> 00:14:50.970 So in fact there are like 4 condition

NOTE Confidence: 0.75955571625

00:14:50.970 --> 00:14:53.987 like I close before and after iOS

NOTE Confidence: 0.75955571625

00:14:53.987 --> 00:14:57.629 which on the blue and the red and the

NOTE Confidence: 0.75955571625

00:14:57.630 --> 00:15:00.430 sorry yes before and after and and.

NOTE Confidence: 0.75955571625

00:15:00.430 --> 00:15:02.120 Natural image which means visual

NOTE Confidence: 0.75955571625

00:15:02.120 --> 00:15:03.810 stimulation before and after in

NOTE Confidence: 0.75955571625

00:15:03.865 --> 00:15:05.489 in white and green and what you

NOTE Confidence: 0.75955571625

00:15:05.489 --> 00:15:07.299 can see that there is a decrease.

NOTE Confidence: 0.75955571625

00:15:07.300 --> 00:15:09.178 So this is the Brodmann areas

NOTE Confidence: 0.75955571625

00:15:09.178 --> 00:15:10.880 corresponding to the visual cortex.

NOTE Confidence: 0.75955571625

00:15:10.880 --> 00:15:14.499 There is a decrease in fact only.

NOTE Confidence: 0.75955571625

00:15:14.500 --> 00:15:16.336 That was before I was camp.

NOTE Confidence: 0.75955571625

00:15:16.340 --> 00:15:17.380 So in other words,

NOTE Confidence: 0.75955571625

00:15:17.380 --> 00:15:18.420 after I was scared,

NOTE Confidence: 0.75955571625

00:15:18.420 --> 00:15:21.260 you have the the I closed all the eyes open.

NOTE Confidence: 0.75955571625

00:15:21.260 --> 00:15:23.260 You have the same activity

NOTE Confidence: 0.75955571625

00:15:23.260 --> 00:15:24.860 in the visual areas,

NOTE Confidence: 0.75955571625

00:15:24.860 --> 00:15:30.170 which is like kind of striking and you also

NOTE Confidence: 0.584492735714286

00:15:31.060 --> 00:15:33.888 relative to. Single track

NOTE Confidence: 0.584492735714286

00:15:33.888 --> 00:15:36.009 within trial baseline.

NOTE Confidence: 0.584492735714286

00:15:36.010 --> 00:15:38.896 So that's not comparing across conditions,

NOTE Confidence: 0.584492735714286

00:15:38.900 --> 00:15:40.400 just comparing each trajectory in

NOTE Confidence: 0.584492735714286

00:15:40.400 --> 00:15:44.430 each condition to its own, yeah?

NOTE Confidence: 0.7594860232

00:15:44.430 --> 00:15:46.570 Then you can have also.

NOTE Confidence: 0.7594860232

00:15:46.570 --> 00:15:48.061 So there is also an I I

NOTE Confidence: 0.7594860232

00:15:48.061 --> 00:15:49.589 will go back to that later,

NOTE Confidence: 0.7594860232

00:15:49.590 --> 00:15:51.940 a decreased feedback and an

NOTE Confidence: 0.7594860232

00:15:51.940 --> 00:15:54.352 increased feed forward under iasca

NOTE Confidence: 0.7594860232

00:15:54.352 --> 00:15:57.358 in eyes closed condition and this

NOTE Confidence: 0.7594860232

00:15:57.358 --> 00:16:00.329 looks like a visual stimulation.

NOTE Confidence: 0.7594860232

00:16:00.330 --> 00:16:02.514 So in fact you have like this increase

NOTE Confidence: 0.7594860232

00:16:02.514 --> 00:16:04.649 that you can see of the blue line

NOTE Confidence: 0.7594860232

00:16:04.649 --> 00:16:06.488 and the decrease of the red line.

NOTE Confidence: 0.7594860232

00:16:06.490 --> 00:16:12.510 So it's like in a way visual eyes close.

NOTE Confidence: 0.7594860232

00:16:12.510 --> 00:16:14.550 You have like similar pattern to.

NOTE Confidence: 0.7594860232

00:16:14.550 --> 00:16:17.784 Uh, to visual estimation, the iOS can.

NOTE Confidence: 0.7594860232

00:16:17.790 --> 00:16:19.968 Under LSD it's a bit different,

NOTE Confidence: 0.7594860232

00:16:19.970 --> 00:16:20.942 but there isn't.

NOTE Confidence: 0.7594860232

00:16:20.942 --> 00:16:23.210 It was observed that there was an

NOTE Confidence: 0.7594860232

00:16:23.277 --> 00:16:25.869 increased activity in the visual cortex.

NOTE Confidence: 0.7594860232

00:16:25.870 --> 00:16:29.134 And also an increased coordination between

NOTE Confidence: 0.7594860232

00:16:29.134 --> 00:16:32.549 several subparts of the visual cortex.

NOTE Confidence: 0.7594860232

00:16:32.550 --> 00:16:35.268 So this can be correlated to

NOTE Confidence: 0.7594860232

00:16:35.268 --> 00:16:37.510 the visual imagery under LSD.

NOTE Confidence: 0.7594860232

00:16:37.510 --> 00:16:38.980 But it's quite difficult in

NOTE Confidence: 0.7594860232

00:16:38.980 --> 00:16:40.450 fact to compare because it's

NOTE Confidence: 0.7594860232

00:16:40.507 --> 00:16:42.187 all these studies are different,

NOTE Confidence: 0.7594860232

00:16:42.190 --> 00:16:44.409 are not necessarily using the same methods.

NOTE Confidence: 0.727787348333333

00:16:47.580 --> 00:16:50.616 Another effect that is uh quite

NOTE Confidence: 0.727787348333333

00:16:50.620 --> 00:16:53.555 reproducibly observed under psychedelic is

NOTE Confidence: 0.727787348333333

00:16:53.555 --> 00:16:57.580 a decrease of low frequency bands power.

NOTE Confidence: 0.727787348333333

00:16:57.580 --> 00:17:00.751 So you know that the different association

NOTE Confidence: 0.727787348333333

00:17:00.751 --> 00:17:03.660 carried like the vector of synchronization

NOTE Confidence: 0.727787348333333

00:17:03.660 --> 00:17:06.660 and information transfer across the brain.

NOTE Confidence: 0.727787348333333

00:17:06.660 --> 00:17:08.900 And what you can see on the second

NOTE Confidence: 0.727787348333333

00:17:08.900 --> 00:17:10.827 delic here for LG Stylo savings,

NOTE Confidence: 0.727787348333333

00:17:10.830 --> 00:17:13.224 that there is really a important

NOTE Confidence: 0.727787348333333

00:17:13.224 --> 00:17:15.709 decrease of alpha and beta bands.

NOTE Confidence: 0.727787348333333

00:17:15.710 --> 00:17:17.859 And for LS you have also decreased

NOTE Confidence: 0.727787348333333

00:17:17.859 --> 00:17:20.347 in Delta and data and also in gamma.

NOTE Confidence: 0.727787348333333

00:17:20.350 --> 00:17:23.326 So for LSD you have basically a decrease

NOTE Confidence: 0.727787348333333

00:17:23.326 --> 00:17:26.487 of all broadband decrease whereas for solo

NOTE Confidence: 0.727787348333333

00:17:26.487 --> 00:17:30.409 Sabine it would be more for alpha and beta.

NOTE Confidence: 0.727787348333333

00:17:30.410 --> 00:17:32.524 This is another way and from another

NOTE Confidence: 0.727787348333333

00:17:32.524 --> 00:17:34.190 study that confirms this results.

NOTE Confidence: 0.727787348333333

00:17:34.190 --> 00:17:36.878 And what you can see that yes indeed

NOTE Confidence: 0.727787348333333

00:17:36.878 --> 00:17:38.854 the decrease is higher under LSD

NOTE Confidence: 0.727787348333333

00:17:38.854 --> 00:17:41.590 and there is also a shift of alpha

NOTE Confidence: 0.727787348333333

00:17:41.590 --> 00:17:43.210 frequency toward higher frequency

NOTE Confidence: 0.727787348333333

00:17:43.210 --> 00:17:47.022 that you can see on the bottom left.

NOTE Confidence: 0.727787348333333

00:17:47.022 --> 00:17:50.825 And a decrease that is more specific

NOTE Confidence: 0.727787348333333

00:17:50.825 --> 00:17:55.690 to alpha and beta than under siding.

NOTE Confidence: 0.727787348333333

00:17:55.690 --> 00:17:56.444 For the,

NOTE Confidence: 0.727787348333333

00:17:56.444 --> 00:17:59.083 you also have a decrease of alpha

NOTE Confidence: 0.727787348333333

00:17:59.083 --> 00:18:02.170 and beta band that you can see here,

NOTE Confidence: 0.727787348333333

00:18:02.170 --> 00:18:04.375 but we'll see that there are different

NOTE Confidence: 0.727787348333333

00:18:04.375 --> 00:18:06.382 pattern and in particular that the

NOTE Confidence: 0.727787348333333

00:18:06.382 --> 00:18:08.380 feed forward or the Yammer bands

NOTE Confidence: 0.727787348333333

00:18:08.380 --> 00:18:10.593 are increased on the iOS and this

NOTE Confidence: 0.727787348333333

00:18:10.593 --> 00:18:13.236 is not something that is observed

NOTE Confidence: 0.727787348333333

00:18:13.236 --> 00:18:16.088 on the silo siding.

NOTE Confidence: 0.727787348333333

00:18:16.090 --> 00:18:19.290 For a decrease and so saving is more

NOTE Confidence: 0.727787348333333

00:18:19.290 --> 00:18:22.586 like no effect or really very light

NOTE Confidence: 0.727787348333333

00:18:22.586 --> 00:18:26.000 changes for this for this frequency.

NOTE Confidence: 0.727787348333333

00:18:26.000 --> 00:18:27.852 And I was scared.

NOTE Confidence: 0.727787348333333

00:18:27.852 --> 00:18:30.167 There are other accused that.

NOTE Confidence: 0.727787348333333

00:18:30.170 --> 00:18:30.594 Um,

NOTE Confidence: 0.727787348333333

00:18:30.594 --> 00:18:33.562 the there is a change in the

NOTE Confidence: 0.727787348333333

00:18:33.562 --> 00:18:35.034 feedforward connectivity and

NOTE Confidence: 0.727787348333333

00:18:35.034 --> 00:18:37.644 in particular there is here.

NOTE Confidence: 0.727787348333333

00:18:37.650 --> 00:18:39.702 So this study focused on information

NOTE Confidence: 0.727787348333333

00:18:39.702 --> 00:18:42.076 transfer and what you can see is

NOTE Confidence: 0.727787348333333

00:18:42.076 --> 00:18:43.954 that there is an increased postural

NOTE Confidence: 0.727787348333333

00:18:43.954 --> 00:18:45.158 entire information transfer,

NOTE Confidence: 0.727787348333333

00:18:45.158 --> 00:18:48.710 so from sensory areas to higher level areas,

NOTE Confidence: 0.727787348333333

00:18:48.710 --> 00:18:50.696 whereas there is a decrease in

NOTE Confidence: 0.727787348333333

00:18:50.696 --> 00:18:52.230 terrible posterior information from so.

NOTE Confidence: 0.727787348333333

00:18:52.230 --> 00:18:53.238 And this is the,

NOTE Confidence: 0.727787348333333

00:18:53.238 --> 00:18:55.518 the graph I just showed you before about

NOTE Confidence: 0.727787348333333

00:18:55.518 --> 00:18:57.648 the the mimicking of visual stimulation

NOTE Confidence: 0.727787348333333

00:18:57.648 --> 00:19:00.244 when eyes are closed and this is the same.

NOTE Confidence: 0.727787348333333

00:19:00.250 --> 00:19:00.970 Do that for a while.

NOTE Confidence: 0.727787348333333

00:19:00.970 --> 00:19:03.568 The previous increasing backlog is decreased.

NOTE Confidence: 0.727787348333333

00:19:03.570 --> 00:19:04.150 Lucy,

NOTE Confidence: 0.848151772

00:19:04.870 --> 00:19:06.342 I don't understand these

NOTE Confidence: 0.848151772

00:19:06.342 --> 00:19:08.154 data and that's my failing.

NOTE Confidence: 0.848151772

00:19:08.154 --> 00:19:09.959 Are you able to explain?

NOTE Confidence: 0.848151772

00:19:09.960 --> 00:19:13.187 Succinctly, how this the the data that

NOTE Confidence: 0.848151772

00:19:13.187 --> 00:19:16.430 you're showing the EEG connectivity data?

NOTE Confidence: 0.848151772

00:19:16.430 --> 00:19:17.942 Correspond to feedforward versus

NOTE Confidence: 0.848151772

00:19:17.942 --> 00:19:19.832 feedback information transfer or is

NOTE Confidence: 0.848151772

00:19:19.832 --> 00:19:21.879 that like a whole lecture by itself?

NOTE Confidence: 0.64943965

00:19:22.510 --> 00:19:26.448 So no like gamma was like regarding the

NOTE Confidence: 0.64943965

00:19:26.448 --> 00:19:29.150 association so it's a bit the shortcut.

NOTE Confidence: 0.64943965

00:19:29.150 --> 00:19:31.929 Alpha and beta were more associated with

NOTE Confidence: 0.64943965

00:19:31.929 --> 00:19:34.775 top down processing while gamma was more

NOTE Confidence: 0.64943965

00:19:34.775 --> 00:19:36.730 associated with both of our processing.

NOTE Confidence: 0.837813694705883

00:19:37.440 --> 00:19:39.234 OK. So these are inferences from

NOTE Confidence: 0.837813694705883

00:19:39.234 --> 00:19:41.068 relative power from changes in power

NOTE Confidence: 0.837813694705883

00:19:41.068 --> 00:19:42.528 in the different frequency bands

NOTE Confidence: 0.703879090909091

00:19:42.960 --> 00:19:45.066 like the. So this is for

NOTE Confidence: 0.703879090909091

00:19:45.066 --> 00:19:46.920 the gamma versus alpha beta,

NOTE Confidence: 0.703879090909091

00:19:46.920 --> 00:19:48.666 but for the like the study

NOTE Confidence: 0.703879090909091

00:19:48.666 --> 00:19:50.759 that is on the bottom left,

NOTE Confidence: 0.703879090909091

00:19:50.760 --> 00:19:52.980 it's really like the the

NOTE Confidence: 0.703879090909091

00:19:52.980 --> 00:19:54.756 measure the information transfer

NOTE Confidence: 0.703879090909091

00:19:54.756 --> 00:19:56.570 between different areas so.

NOTE Confidence: 0.570898831

00:19:59.210 --> 00:20:00.338 I think there's

NOTE Confidence: 0.655185045

00:20:00.350 --> 00:20:02.540 like a time 15 cross correlation.

NOTE Confidence: 0.82964784

00:20:02.870 --> 00:20:05.796 Yeah, they do like the I.

NOTE Confidence: 0.82964784

00:20:05.796 --> 00:20:07.826 They do a Granger causality,

NOTE Confidence: 0.82964784

00:20:07.830 --> 00:20:08.900 I think in this study.

NOTE Confidence: 0.641944056

00:20:10.200 --> 00:20:11.240 But in the earlier study,

NOTE Confidence: 0.641944056

00:20:11.240 --> 00:20:12.608 there wasn't featured personality.

NOTE Confidence: 0.641944056

00:20:12.608 --> 00:20:14.660 It's just based on an assumption

NOTE Confidence: 0.641944056

00:20:14.660 --> 00:20:17.368 based on what's been observed in

NOTE Confidence: 0.641944056

00:20:17.368 --> 00:20:18.596 visual processing for example,

NOTE Confidence: 0.641944056

00:20:18.600 --> 00:20:19.468 or something like that

NOTE Confidence: 0.635256753333333

00:20:20.090 --> 00:20:22.770 in the previous one with I like.

NOTE Confidence: 0.51813069

00:20:24.900 --> 00:20:29.000 Alpha represents top down ohh,

NOTE Confidence: 0.653160873333333

00:20:29.070 --> 00:20:30.996 so the alpha and the like.

NOTE Confidence: 0.653160873333333

00:20:31.000 --> 00:20:32.855 The correspondence between alpha and

NOTE Confidence: 0.653160873333333

00:20:32.855 --> 00:20:35.748 top down is more related to like other

NOTE Confidence: 0.653160873333333

00:20:35.748 --> 00:20:38.009 studies that they did not present here.

NOTE Confidence: 0.653160873333333

00:20:38.010 --> 00:20:42.600 It's like several studies showed that.

NOTE Confidence: 0.653160873333333

00:20:42.600 --> 00:20:44.035 You have like like object

NOTE Confidence: 0.653160873333333

00:20:44.035 --> 00:20:45.777 recognition for example is held by

NOTE Confidence: 0.653160873333333

00:20:45.777 --> 00:20:47.289 half hours and things like that.

NOTE Confidence: 0.653160873333333

00:20:47.290 --> 00:20:48.430 But it's a different feature.

NOTE Confidence: 0.653160873333333

00:20:48.430 --> 00:20:52.339 It's visual processing exactly, yeah, yeah.

NOTE Confidence: 0.695682267272727

00:20:56.420 --> 00:20:58.940 OK. And the last,

NOTE Confidence: 0.695682267272727

00:20:58.940 --> 00:21:03.620 the last part of the literature isn't?

NOTE Confidence: 0.695682267272727

00:21:03.620 --> 00:21:07.598 Interested about signal complexity or entry?

NOTE Confidence: 0.695682267272727

00:21:07.600 --> 00:21:10.822 So it's basically corresponds to the

NOTE Confidence: 0.695682267272727

00:21:10.822 --> 00:21:14.082 quantity of information in the brain

NOTE Confidence: 0.695682267272727

00:21:14.082 --> 00:21:17.148 and how how much this information

NOTE Confidence: 0.695682267272727

00:21:17.148 --> 00:21:19.800 is unpredictable in space and time.

NOTE Confidence: 0.695682267272727

00:21:19.800 --> 00:21:22.040 So this is an example for cytosine

NOTE Confidence: 0.695682267272727

00:21:22.040 --> 00:21:24.260 and how you can measure that.

NOTE Confidence: 0.695682267272727

00:21:24.260 --> 00:21:26.934 So you take the activity in different

NOTE Confidence: 0.695682267272727

00:21:26.934 --> 00:21:29.865 region and you can see how these

NOTE Confidence: 0.695682267272727

00:21:29.865 --> 00:21:32.421 different region are correlated and have

NOTE Confidence: 0.695682267272727

00:21:32.503 --> 00:21:35.298 connectivity at different time points.

NOTE Confidence: 0.695682267272727

00:21:35.300 --> 00:21:38.820 And you can measure I don't know what

NOTE Confidence: 0.695682267272727

00:21:38.820 --> 00:21:41.776 it is and you can measure the entropy

NOTE Confidence: 0.695682267272727

00:21:41.776 --> 00:21:44.203 by looking at the probability of

NOTE Confidence: 0.695682267272727

00:21:44.203 --> 00:21:47.113 changing of this pattern of connectivity

NOTE Confidence: 0.695682267272727

00:21:47.120 --> 00:21:49.628 in the across the run inference.

NOTE Confidence: 0.695682267272727

00:21:49.630 --> 00:21:52.241 And what it was found is that

NOTE Confidence: 0.695682267272727

00:21:52.241 --> 00:21:55.269 there is an increase of entropy.

NOTE Confidence: 0.695682267272727

00:21:55.270 --> 00:21:56.810 Leaving.

NOTE Confidence: 0.695682267272727

00:21:56.810 --> 00:21:59.258 And there are other way to

NOTE Confidence: 0.695682267272727

00:21:59.258 --> 00:22:00.482 measure the complexity,

NOTE Confidence: 0.695682267272727

00:22:00.490 --> 00:22:02.310 so these diversity of information

NOTE Confidence: 0.695682267272727

00:22:02.310 --> 00:22:05.099 in the brain and the diversity of

NOTE Confidence: 0.695682267272727

00:22:05.099 --> 00:22:06.750 pattern in the brain, for example.

NOTE Confidence: 0.787701955769231

00:22:08.820 --> 00:22:11.984 Complexity and you can see also that

NOTE Confidence: 0.787701955769231

00:22:11.984 --> 00:22:15.084 there is an increase in complexity

NOTE Confidence: 0.787701955769231

00:22:15.084 --> 00:22:18.366 under saving and LSD and that

NOTE Confidence: 0.787701955769231

00:22:18.366 --> 00:22:21.649 under LSD like it's a very general

NOTE Confidence: 0.787701955769231

00:22:21.650 --> 00:22:23.438 complexity that interest pretty

NOTE Confidence: 0.787701955769231

00:22:23.438 --> 00:22:26.120 much like all the posterior part

NOTE Confidence: 0.787701955769231

00:22:26.192 --> 00:22:29.710 of the brain, whether for like.

NOTE Confidence: 0.787701955769231

00:22:29.710 --> 00:22:31.440 The solar savings? More India.

NOTE Confidence: 0.750886781444445

00:22:33.850 --> 00:22:36.025 And this increase of Lymphoseek

NOTE Confidence: 0.750886781444445

00:22:36.025 --> 00:22:38.255 complexity was also observed and

NOTE Confidence: 0.750886781444445

00:22:38.255 --> 00:22:41.165 of Shannon entropy under iOS cap.

NOTE Confidence: 0.750886781444445

00:22:41.170 --> 00:22:45.069 So this is something that is quite.

NOTE Confidence: 0.750886781444445

00:22:45.070 --> 00:22:47.422 Like that seems to be shared

NOTE Confidence: 0.750886781444445

00:22:47.422 --> 00:22:49.370 between the different molecules.

NOTE Confidence: 0.813777563636364

00:22:49.940 --> 00:22:52.148 Lucy sorry again my my ignorance

NOTE Confidence: 0.813777563636364

00:22:52.148 --> 00:22:54.560 of some of the techniques.

NOTE Confidence: 0.813777563636364

00:22:54.560 --> 00:22:56.527 I have an intuition for what increased

NOTE Confidence: 0.813777563636364

00:22:56.527 --> 00:22:58.020 entropy means that's rough crudely

NOTE Confidence: 0.813777563636364

00:22:58.020 --> 00:22:59.515 analogous to more noise right?

NOTE Confidence: 0.813777563636364

00:22:59.520 --> 00:23:01.152 Injecting noise. What is?

NOTE Confidence: 0.813777563636364

00:23:01.152 --> 00:23:02.376 What is complexity?

NOTE Confidence: 0.813777563636364

00:23:02.380 --> 00:23:03.804 Does this measure of

NOTE Confidence: 0.813777563636364

00:23:03.804 --> 00:23:05.940 Flexity getting in is it on?

NOTE Confidence: 0.813777563636364

00:23:05.940 --> 00:23:07.542 The complexity and entropy are both

NOTE Confidence: 0.813777563636364

00:23:07.542 --> 00:23:09.706 going in the same direction and I

NOTE Confidence: 0.813777563636364

00:23:09.706 --> 00:23:11.757 think of complexity sort of amid a

NOTE Confidence: 0.813777563636364

00:23:11.757 --> 00:23:13.853 happy medium between between, you know,

NOTE Confidence: 0.813777563636364

00:23:13.853 --> 00:23:15.539 crystalline purity and total noise and.

NOTE Confidence: 0.813777563636364

00:23:15.540 --> 00:23:17.190 Like somewhere in the middle but.

NOTE Confidence: 0.820870224545455

00:23:18.550 --> 00:23:19.885 So, so complexity will be

NOTE Confidence: 0.820870224545455

00:23:19.885 --> 00:23:21.580 so I will just jump like.

NOTE Confidence: 0.820870224545455

00:23:21.580 --> 00:23:22.870 So this was more the title,

NOTE Confidence: 0.820870224545455

00:23:22.870 --> 00:23:24.767 but this slide is more about entropy.

NOTE Confidence: 0.820870224545455

00:23:24.770 --> 00:23:26.405 But the next slide will

NOTE Confidence: 0.820870224545455

00:23:26.405 --> 00:23:27.386 show about complexity.

NOTE Confidence: 0.820870224545455

00:23:27.390 --> 00:23:31.870 But complexity is basically like

NOTE Confidence: 0.820870224545455

00:23:31.870 --> 00:23:33.895 the diversity of information

NOTE Confidence: 0.820870224545455

00:23:33.895 --> 00:23:36.145 you can have in the brain.

NOTE Confidence: 0.820870224545455

00:23:36.150 --> 00:23:38.688 So it's like.

NOTE Confidence: 0.820870224545455

00:23:38.690 --> 00:23:39.980 I don't know exactly how to

NOTE Confidence: 0.820870224545455

00:23:39.980 --> 00:23:40.840 explain better than that,

NOTE Confidence: 0.820870224545455

00:23:40.840 --> 00:23:43.120 but it's not like with entropy.

NOTE Confidence: 0.820870224545455

00:23:43.120 --> 00:23:44.278 We have also the idea of

NOTE Confidence: 0.820870224545455

00:23:44.278 --> 00:23:45.590 a kind of a disorder,

NOTE Confidence: 0.820870224545455

00:23:45.590 --> 00:23:48.310 so also like a lot of changes across

NOTE Confidence: 0.820870224545455

00:23:48.310 --> 00:23:51.174 time and the complexity will be for

NOTE Confidence: 0.820870224545455

00:23:51.174 --> 00:23:53.672 example a more enhanced repertoire,

NOTE Confidence: 0.820870224545455

00:23:53.672 --> 00:23:58.544 like more diverse patterns of activation.

NOTE Confidence: 0.820870224545455

00:23:58.550 --> 00:23:59.350 Does it make sense?

NOTE Confidence: 0.884581558181818

00:23:59.440 --> 00:24:00.976 Yes. So they don't have to go in

NOTE Confidence: 0.884581558181818

00:24:00.976 --> 00:24:03.329 the same direction, but it's not

NOTE Confidence: 0.884581558181818

00:24:03.329 --> 00:24:05.744 contradictory that they do OK.

NOTE Confidence: 0.730377439230769

00:24:08.000 --> 00:24:11.640 So unless there is also more occurrence

NOTE Confidence: 0.730377439230769

00:24:11.640 --> 00:24:15.299 of global coherence phase log states, so.

NOTE Confidence: 0.730377439230769

00:24:15.299 --> 00:24:19.371 So here what the authors did is that

NOTE Confidence: 0.730377439230769

00:24:19.371 --> 00:24:22.758 so they took the the brain activity

NOTE Confidence: 0.730377439230769

00:24:22.758 --> 00:24:25.571 and they try to slice it according

NOTE Confidence: 0.730377439230769

00:24:25.571 --> 00:24:28.539 to like to define kind of phase lock

NOTE Confidence: 0.730377439230769

00:24:28.539 --> 00:24:31.262 states that corresponds in fact to

NOTE Confidence: 0.730377439230769

00:24:31.262 --> 00:24:33.537 activation patterns of activation and

NOTE Confidence: 0.730377439230769

00:24:33.615 --> 00:24:36.420 of connectivity between different areas.

NOTE Confidence: 0.730377439230769

00:24:36.420 --> 00:24:38.646 So this is not very obvious.

NOTE Confidence: 0.730377439230769

00:24:38.650 --> 00:24:41.702 Here but in fact so you have states

NOTE Confidence: 0.730377439230769

00:24:41.702 --> 00:24:43.886 where some region are connected one to

NOTE Confidence: 0.730377439230769

00:24:43.886 --> 00:24:45.842 the other and the first states that

NOTE Confidence: 0.730377439230769

00:24:45.842 --> 00:24:48.095 is that you can see the more frequent

NOTE Confidence: 0.730377439230769

00:24:48.095 --> 00:24:50.237 than this is in fact increased under

NOTE Confidence: 0.730377439230769

00:24:50.240 --> 00:24:52.128 sale siding is in fact a state where

NOTE Confidence: 0.730377439230769

00:24:52.128 --> 00:24:53.648 everything is connected to another.

NOTE Confidence: 0.730377439230769

00:24:53.650 --> 00:24:55.911 So there is no difference and not

NOTE Confidence: 0.730377439230769

00:24:55.911 --> 00:24:57.968 sub support that are more connected

NOTE Confidence: 0.730377439230769

00:24:57.968 --> 00:25:00.210 than other and that can corresponds

NOTE Confidence: 0.730377439230769

00:25:00.210 --> 00:25:02.370 to a specific network.

NOTE Confidence: 0.730377439230769

00:25:02.370 --> 00:25:04.014 And what is observed is that

NOTE Confidence: 0.730377439230769

00:25:04.014 --> 00:25:06.010 in fact on the same savings.

NOTE Confidence: 0.730377439230769

00:25:06.010 --> 00:25:08.824 So not only this Facebook state is.

NOTE Confidence: 0.730377439230769

00:25:08.830 --> 00:25:10.895 More frequent, but also there is uh,

NOTE Confidence: 0.730377439230769

00:25:10.900 --> 00:25:13.204 more probability to switch from any

NOTE Confidence: 0.730377439230769

00:25:13.204 --> 00:25:16.120 other states to this state of coherence,

NOTE Confidence: 0.730377439230769

00:25:16.120 --> 00:25:19.220 whereas like this frontoparietal state,

NOTE Confidence: 0.730377439230769

00:25:19.220 --> 00:25:21.452 the state three is less probable

NOTE Confidence: 0.730377439230769

00:25:21.452 --> 00:25:24.134 and there is less transition toward

NOTE Confidence: 0.730377439230769

00:25:24.134 --> 00:25:26.366 the states after something.

NOTE Confidence: 0.711693891777778

00:25:26.640 --> 00:25:28.020 Is this with global signal

NOTE Confidence: 0.711693891777778

00:25:28.020 --> 00:25:29.124 regression in the data?

NOTE Confidence: 0.729002596666667

00:25:31.290 --> 00:25:33.502 I'm not sure just state one is

NOTE Confidence: 0.729002596666667

00:25:33.502 --> 00:25:36.558 global signal, right? So it's state.

NOTE Confidence: 0.729002596666667

00:25:36.558 --> 00:25:39.390 So if you do it without global signal

NOTE Confidence: 0.729002596666667

00:25:39.466 --> 00:25:42.714 regression and the prominent state is global.

NOTE Confidence: 0.729002596666667

00:25:42.720 --> 00:25:44.974 If you if you did global signal

NOTE Confidence: 0.729002596666667

00:25:44.974 --> 00:25:46.559 regression and still saw that,

NOTE Confidence: 0.729002596666667

00:25:46.560 --> 00:25:48.060 that would mean something quite different.

NOTE Confidence: 0.740808966666667

00:25:49.030 --> 00:25:51.630 I think the control for that, but I

NOTE Confidence: 0.740808966666667

00:25:51.630 --> 00:25:55.780 cannot like yeah when I'm not 100% sure.

NOTE Confidence: 0.894535264

00:25:57.970 --> 00:26:02.195 And finally, you can also slice

NOTE Confidence: 0.894535264

00:26:02.195 --> 00:26:04.370 the like decompose the brain

NOTE Confidence: 0.894535264

00:26:04.370 --> 00:26:06.110 activity into harmonic states.

NOTE Confidence: 0.894535264

00:26:06.110 --> 00:26:08.434 So this is a bit tricky and

NOTE Confidence: 0.894535264

00:26:08.434 --> 00:26:11.089 I'm not an expert about that,

NOTE Confidence: 0.894535264

00:26:11.090 --> 00:26:13.484 but basically you will use the connectome

NOTE Confidence: 0.894535264

00:26:13.484 --> 00:26:14.930 and the structural connectivity

NOTE Confidence: 0.894535264

00:26:14.930 --> 00:26:18.123 of the brain and you will check

NOTE Confidence: 0.894535264

00:26:18.123 --> 00:26:21.488 how like the different harmonies,

NOTE Confidence: 0.894535264

00:26:21.490 --> 00:26:23.550 the different frequency of

NOTE Confidence: 0.894535264

00:26:23.550 --> 00:26:25.610 oscillation of this structural

NOTE Confidence: 0.894535264

00:26:25.610 --> 00:26:27.900 connectivity and you can then map.

NOTE Confidence: 0.894535264

00:26:27.900 --> 00:26:31.215 And analyze brain imaging according

NOTE Confidence: 0.894535264

00:26:31.215 --> 00:26:35.620 to a combination of these different

NOTE Confidence: 0.894535264

00:26:35.620 --> 00:26:37.824 patterns of connectome harmonics.

NOTE Confidence: 0.894535264

00:26:37.824 --> 00:26:41.130 So this is what these authors

NOTE Confidence: 0.894535264

00:26:41.218 --> 00:26:43.770 like developed and used for

NOTE Confidence: 0.894535264

00:26:43.770 --> 00:26:46.470 studying cellular Sabine and LSD.

NOTE Confidence: 0.894535264

00:26:46.470 --> 00:26:48.612 And basically what they find for

NOTE Confidence: 0.894535264

00:26:48.612 --> 00:26:51.025 silo sybian is that here the

NOTE Confidence: 0.894535264

00:26:51.025 --> 00:26:52.841 representation of the different

NOTE Confidence: 0.894535264

00:26:52.841 --> 00:26:55.198 energy like the different the

NOTE Confidence: 0.894535264

00:26:55.198 --> 00:26:57.548 probability of this harmonic pattern.

NOTE Confidence: 0.894535264

00:26:57.550 --> 00:27:00.105 And there is some changes where some

NOTE Confidence: 0.894535264

00:27:00.105 --> 00:27:02.672 of them will be more represented

NOTE Confidence: 0.894535264

00:27:02.672 --> 00:27:05.786 under and some of them will be less

NOTE Confidence: 0.894535264

00:27:05.786 --> 00:27:07.397 represented and interestingly when

NOTE Confidence: 0.894535264

00:27:07.397 --> 00:27:09.427 you plot the overall probability.

NOTE Confidence: 0.894535264

00:27:09.430 --> 00:27:10.398 You have different states.

NOTE Confidence: 0.894535264

00:27:10.398 --> 00:27:12.384 What you can see is that the more

NOTE Confidence: 0.894535264

00:27:12.384 --> 00:27:14.078 probable state will be a bit less

NOTE Confidence: 0.894535264

00:27:14.078 --> 00:27:15.318 probable underside of siding,

NOTE Confidence: 0.894535264

00:27:15.320 --> 00:27:17.654 while some states that are usually

NOTE Confidence: 0.894535264

00:27:17.654 --> 00:27:19.670 less represented in those possible

NOTE Confidence: 0.894535264

00:27:19.670 --> 00:27:21.645 will be more representative under

NOTE Confidence: 0.894535264

00:27:21.645 --> 00:27:24.029 set of sibling and they're the

NOTE Confidence: 0.894535264

00:27:24.029 --> 00:27:25.497 same pattern with LSD.

NOTE Confidence: 0.894535264

00:27:25.500 --> 00:27:27.684 So the main idea here is to say

NOTE Confidence: 0.894535264

00:27:27.684 --> 00:27:30.123 that in fact you will push some

NOTE Confidence: 0.894535264

00:27:30.123 --> 00:27:32.380 state that are usually quite rare

NOTE Confidence: 0.894535264

00:27:32.380 --> 00:27:34.564 and you will decrease maybe state

NOTE Confidence: 0.894535264

00:27:34.564 --> 00:27:37.640 that are more frequent.

NOTE Confidence: 0.894535264

00:27:37.640 --> 00:27:40.650 The brain when taking psychedelic

NOTE Confidence: 0.669421177777778

00:27:41.100 --> 00:27:42.730 and that that's qualitatively consistent

NOTE Confidence: 0.669421177777778

00:27:42.730 --> 00:27:44.034 with the increased complexity,

NOTE Confidence: 0.669421177777778

00:27:44.040 --> 00:27:45.800 right, because you have more,

NOTE Confidence: 0.669421177777778

00:27:45.800 --> 00:27:47.400 more states are being represented so

NOTE Confidence: 0.669421177777778

00:27:47.400 --> 00:27:49.168 there's a larger repertories, OK.

NOTE Confidence: 0.829283796666667

00:27:50.750 --> 00:27:52.970 And like there were also other,

NOTE Confidence: 0.829283796666667

00:27:52.970 --> 00:27:55.450 uh, quite technical studies using

NOTE Confidence: 0.829283796666667

00:27:55.450 --> 00:27:57.930 the fractal dimension in spatial

NOTE Confidence: 0.829283796666667

00:27:58.008 --> 00:28:01.108 or temporal dimensions or the

NOTE Confidence: 0.829283796666667

00:28:01.108 --> 00:28:02.968 directed international connectivity.

NOTE Confidence: 0.829283796666667

00:28:02.970 --> 00:28:05.224 But the main idea was that you

NOTE Confidence: 0.829283796666667

00:28:05.224 --> 00:28:07.137 have less constraints in the brain

NOTE Confidence: 0.829283796666667

00:28:07.137 --> 00:28:08.977 and more diverse and fluctuates

NOTE Confidence: 0.829283796666667

00:28:08.977 --> 00:28:12.312 fluctuation in the brain connectivity

NOTE Confidence: 0.829283796666667

00:28:12.312 --> 00:28:14.313 patterns under psychedelics.

NOTE Confidence: 0.37214379

00:28:16.550 --> 00:28:17.430 Different religions.

NOTE Confidence: 0.897841461666667

00:28:20.000 --> 00:28:23.728 So that's a very good question. In fact I I

NOTE Confidence: 0.704572464923077

00:28:24.240 --> 00:28:26.840 I think the people on zoom since we're

NOTE Confidence: 0.704572464923077

00:28:26.840 --> 00:28:29.018 hearing from from Luby's microphone.

NOTE Confidence: 0.704572464923077

00:28:29.020 --> 00:28:30.294 So I think they're having I loud

NOTE Confidence: 0.704572464923077

00:28:30.294 --> 00:28:31.793 and I'm close but I think they're

NOTE Confidence: 0.704572464923077

00:28:31.793 --> 00:28:32.933 having a little trouble hearing.

NOTE Confidence: 0.704572464923077

00:28:32.940 --> 00:28:34.837 So the question was how does this

NOTE Confidence: 0.704572464923077

00:28:34.837 --> 00:28:36.020 compare these these complexity

NOTE Confidence: 0.704572464923077

00:28:36.020 --> 00:28:37.892 findings compared to what might be

NOTE Confidence: 0.704572464923077

00:28:37.892 --> 00:28:39.860 seen with other psychoactive drugs.

NOTE Confidence: 0.704572464923077

00:28:39.860 --> 00:28:41.726 Are these unique to the psychedelic.

NOTE Confidence: 0.695785695857143

00:28:41.940 --> 00:28:45.716 So I did not see other study doing

NOTE Confidence: 0.695785695857143

00:28:45.716 --> 00:28:49.630 that for example for Kittanning so.

NOTE Confidence: 0.695785695857143

00:28:49.630 --> 00:28:51.943 Which is maybe one of the things that has

NOTE Confidence: 0.695785695857143

00:28:51.943 --> 00:28:54.019 the more closest pharmacological pattern

NOTE Confidence: 0.695785695857143

00:28:54.019 --> 00:28:56.659 by activating the neurons and algorithm.

NOTE Confidence: 0.725407173846154

00:28:58.380 --> 00:29:00.708 Or even just a more land drug likeness

NOTE Confidence: 0.725407173846154

00:29:00.708 --> 00:29:02.640 SSRI or some other drug, yeah,

NOTE Confidence: 0.725407173846154

00:29:02.640 --> 00:29:04.260 he's going to have some monoamines

NOTE Confidence: 0.725407173846154

00:29:04.260 --> 00:29:08.010 and compared the network. So

NOTE Confidence: 0.654770575

00:29:08.010 --> 00:29:09.366 I will go to that later.

NOTE Confidence: 0.654770575

00:29:09.370 --> 00:29:11.230 But there is like this,

NOTE Confidence: 0.654770575

00:29:11.230 --> 00:29:14.607 this study by character is team

NOTE Confidence: 0.654770575

00:29:14.607 --> 00:29:16.992 that compared for example the

NOTE Confidence: 0.654770575

00:29:16.992 --> 00:29:18.423 integration between different

NOTE Confidence: 0.654770575

00:29:18.423 --> 00:29:20.406 networks and we can think that

NOTE Confidence: 0.654770575

00:29:20.406 --> 00:29:23.005 this is also linked to this between

NOTE Confidence: 0.654770575

00:29:23.005 --> 00:29:25.098 connectivity across the brain and

NOTE Confidence: 0.654770575

00:29:25.098 --> 00:29:28.460 there is not a change in modularity.

NOTE Confidence: 0.654770575

00:29:28.460 --> 00:29:30.222 This is not exactly the same, but.

NOTE Confidence: 0.654770575

00:29:30.222 --> 00:29:34.020 We can imagine that this is a right not

NOTE Confidence: 0.654770575

00:29:34.020 --> 00:29:36.620 to put all these effects and also an

NOTE Confidence: 0.654770575

00:29:36.620 --> 00:29:38.834 important thing is that these effects

NOTE Confidence: 0.654770575

00:29:38.834 --> 00:29:40.709 are correlated to acute effects.

NOTE Confidence: 0.654770575

00:29:40.710 --> 00:29:42.054 So I mean it's,

NOTE Confidence: 0.654770575

00:29:42.054 --> 00:29:44.530 it's it could be quite specific in

NOTE Confidence: 0.654770575

00:29:44.530 --> 00:29:46.840 fact to the subjective effect but for

NOTE Confidence: 0.654770575

00:29:46.840 --> 00:29:48.040 ketamine it's a very good question.

NOTE Confidence: 0.654770575

00:29:48.040 --> 00:29:49.234 I mean yeah,

NOTE Confidence: 0.654770575

00:29:49.234 --> 00:29:52.020 because even if the subjective I'll be

NOTE Confidence: 0.654770575

00:29:52.099 --> 00:29:54.825 different maybe there are like just.

NOTE Confidence: 0.654770575

00:29:54.825 --> 00:29:56.750 As far as I know,

NOTE Confidence: 0.654770575

00:29:56.750 --> 00:29:58.616 it hasn't been explored so much,

NOTE Confidence: 0.773686418666667

00:29:58.870 --> 00:30:00.304 but these analysis could be done

NOTE Confidence: 0.773686418666667

00:30:00.304 --> 00:30:02.018 in the resting state F MRI datasets

NOTE Confidence: 0.773686418666667

00:30:02.018 --> 00:30:05.700 that exist, right? But yeah.

NOTE Confidence: 0.651932716666667

00:30:05.700 --> 00:30:06.258 This is so

NOTE Confidence: 0.817343114166667

00:30:06.270 --> 00:30:07.812 someone needs to figure out what

NOTE Confidence: 0.817343114166667

00:30:07.812 --> 00:30:10.040 it means and then do it, yeah?

NOTE Confidence: 0.706522505

00:30:13.590 --> 00:30:15.750 There are other important changes

NOTE Confidence: 0.706522505

00:30:15.750 --> 00:30:18.640 in those acrylic about emotion,

NOTE Confidence: 0.706522505

00:30:18.640 --> 00:30:22.615 social and software processing so.

NOTE Confidence: 0.706522505

00:30:22.620 --> 00:30:24.786 And there is overall decreased response,

NOTE Confidence: 0.706522505

00:30:24.790 --> 00:30:28.360 brain response during emotional processing.

NOTE Confidence: 0.706522505

00:30:28.360 --> 00:30:29.739 So what you can see here is

NOTE Confidence: 0.706522505

00:30:29.739 --> 00:30:31.148 that on the side of saving,

NOTE Confidence: 0.706522505

00:30:31.150 --> 00:30:34.293 there is a decrease for of the

NOTE Confidence: 0.706522505

00:30:34.293 --> 00:30:36.869 amygdala activity that is more

NOTE Confidence: 0.706522505

00:30:36.869 --> 00:30:39.141 important for negative emotion

NOTE Confidence: 0.706522505

00:30:39.141 --> 00:30:41.413 compared to neutral emotion.

NOTE Confidence: 0.706522505

00:30:41.420 --> 00:30:45.310 Here uh is uh under again like the

NOTE Confidence: 0.706522505

00:30:45.310 --> 00:30:47.650 network and small yellow you have

NOTE Confidence: 0.706522505

00:30:47.650 --> 00:30:50.268 the increase to shuffle places.

NOTE Confidence: 0.759773478571429

00:30:52.320 --> 00:30:54.889 And here and here is a ninja.

NOTE Confidence: 0.698466468333333

00:30:57.630 --> 00:31:01.678 Measure of the N 170 and which you can see

NOTE Confidence: 0.698466468333333

00:31:01.678 --> 00:31:04.769 is that there is a specific increase of.

NOTE Confidence: 0.698466468333333

00:31:04.770 --> 00:31:08.564 Of this wave this is associated with.

NOTE Confidence: 0.698466468333333

00:31:08.570 --> 00:31:09.538 I've just been thinking

NOTE Confidence: 0.698466468333333

00:31:09.538 --> 00:31:10.990 that you don't see at all,

NOTE Confidence: 0.698466468333333

00:31:10.990 --> 00:31:15.840 for it's important for neutral emotion.

NOTE Confidence: 0.698466468333333

00:31:15.840 --> 00:31:18.388 Question are they under the influence of?

NOTE Confidence: 0.851360112

00:31:20.430 --> 00:31:22.100 Yeah, for this, for this,

NOTE Confidence: 0.851360112

00:31:22.100 --> 00:31:24.281 it says it's, it's during the, the,

NOTE Confidence: 0.851360112

00:31:24.281 --> 00:31:26.086 it's during the acute effects.

NOTE Confidence: 0.827788101666667

00:31:30.620 --> 00:31:34.195 But this decrease of the and 170

NOTE Confidence: 0.827788101666667

00:31:34.195 --> 00:31:36.470 was also fined for neutral steam in

NOTE Confidence: 0.827788101666667

00:31:36.470 --> 00:31:38.431 another study and also for organiza

NOTE Confidence: 0.827788101666667

00:31:38.431 --> 00:31:40.303 steam that you know are these

NOTE Confidence: 0.827788101666667

00:31:40.373 --> 00:31:42.375 kind of triangle that you can see

NOTE Confidence: 0.827788101666667

00:31:42.375 --> 00:31:44.174 with the using visual integration.

NOTE Confidence: 0.827788101666667

00:31:44.174 --> 00:31:47.030 So maybe they are not very specific

NOTE Confidence: 0.827788101666667

00:31:47.103 --> 00:31:49.017 emotional processing. Umm.

NOTE Confidence: 0.827788101666667

00:31:49.017 --> 00:31:52.566 This is not observed under iowaska really,

NOTE Confidence: 0.827788101666667

00:31:52.570 --> 00:31:54.266 but there is less study for Iowa Aska.

NOTE Confidence: 0.827788101666667

00:31:54.270 --> 00:31:57.728 In fact, there was an increase of

NOTE Confidence: 0.827788101666667

00:31:57.728 --> 00:32:00.754 different region pertaining to the to

NOTE Confidence: 0.827788101666667

00:32:00.754 --> 00:32:03.670 the medial temporal lobe and increase

NOTE Confidence: 0.827788101666667

00:32:03.670 --> 00:32:08.458 connectivity again between the and the right.

NOTE Confidence: 0.827788101666667

00:32:08.460 --> 00:32:09.860 This confirms that the same

NOTE Confidence: 0.827788101666667

00:32:09.860 --> 00:32:11.260 study that they presented before,

NOTE Confidence: 0.827788101666667

00:32:11.260 --> 00:32:15.390 so it's difficult to generalize.

NOTE Confidence: 0.827788101666667

00:32:15.390 --> 00:32:16.900 And they'll say there is,

NOTE Confidence: 0.827788101666667

00:32:16.900 --> 00:32:19.348 there is also an increased interaction

NOTE Confidence: 0.827788101666667

00:32:19.348 --> 00:32:21.803 with the environment and in particular

NOTE Confidence: 0.827788101666667

00:32:21.803 --> 00:32:24.250 so there there were several studies

NOTE Confidence: 0.827788101666667

00:32:24.250 --> 00:32:27.000 using LSD during music listening.

NOTE Confidence: 0.827788101666667

00:32:27.000 --> 00:32:29.136 And what you can see is that there

NOTE Confidence: 0.827788101666667

00:32:29.136 --> 00:32:31.210 is an increased coupling between

NOTE Confidence: 0.827788101666667

00:32:31.210 --> 00:32:34.471 visual cortex and cortex and more

NOTE Confidence: 0.827788101666667

00:32:34.471 --> 00:32:38.053 particularly there is more influence of.

NOTE Confidence: 0.827788101666667

00:32:38.060 --> 00:32:39.460 Over the visual context.

NOTE Confidence: 0.827788101666667

00:32:39.460 --> 00:32:42.461 That can be linked to the visual imagery

NOTE Confidence: 0.827788101666667

00:32:42.461 --> 00:32:45.765 that you have when listening to music under.

NOTE Confidence: 0.827788101666667

00:32:45.770 --> 00:32:46.120 Because.

NOTE Confidence: 0.86158159

00:32:46.920 --> 00:32:48.770 That contrast there is listening

NOTE Confidence: 0.86158159

00:32:48.770 --> 00:32:50.250 to music without psychedelics,

NOTE Confidence: 0.777129905

00:32:50.820 --> 00:32:53.196 yes. In this case it's with and without.

NOTE Confidence: 0.777129905

00:32:53.200 --> 00:32:55.160 And they did also before,

NOTE Confidence: 0.777129905

00:32:55.160 --> 00:32:56.888 so this is the same on the right.

NOTE Confidence: 0.777129905

00:32:56.890 --> 00:32:58.505 This is the same alcohol

NOTE Confidence: 0.777129905

00:32:58.505 --> 00:33:00.120 that they did also before,

NOTE Confidence: 0.777129905

00:33:00.120 --> 00:33:02.286 during and after. So they compare,

NOTE Confidence: 0.750090865

00:33:02.400 --> 00:33:03.696 but they're always listening to music.

NOTE Confidence: 0.758702994

00:33:04.630 --> 00:33:06.790 No. Before listening to music,

NOTE Confidence: 0.758702994

00:33:06.790 --> 00:33:08.378 under secondary, before music,

NOTE Confidence: 0.758702994

00:33:08.378 --> 00:33:09.966 during and after music.

NOTE Confidence: 0.758702994

00:33:09.970 --> 00:33:11.825 So there is like 2

NOTE Confidence: 0.758702994

00:33:11.825 --> 00:33:14.910 crossover there is possible.

NOTE Confidence: 0.758702994

00:33:14.910 --> 00:33:16.154 These three moments before,

NOTE Confidence: 0.758702994

00:33:16.154 --> 00:33:18.020 during and after listening to me.

NOTE Confidence: 0.758702994

00:33:18.020 --> 00:33:20.066 So only one can only listen

NOTE Confidence: 0.758702994

00:33:20.066 --> 00:33:21.430 to music during one.

NOTE Confidence: 0.746418116666667

00:33:22.000 --> 00:33:23.715 And what they showed this couple in

NOTE Confidence: 0.746418116666667

00:33:23.715 --> 00:33:25.440 finding is the interactive effect.

NOTE Confidence: 0.746418116666667

00:33:25.440 --> 00:33:27.510 Exactly. Music and psychedelic. Yeah.

NOTE Confidence: 0.831140435

00:33:27.520 --> 00:33:32.370 Thank you. And there is also so.

NOTE Confidence: 0.831140435

00:33:32.370 --> 00:33:34.350 And an increase of um,

NOTE Confidence: 0.831140435

00:33:34.350 --> 00:33:36.535 um diversity under music that

NOTE Confidence: 0.831140435

00:33:36.535 --> 00:33:39.296 is more important than in the

NOTE Confidence: 0.831140435

00:33:39.296 --> 00:33:41.746 condition before and after music.

NOTE Confidence: 0.831140435

00:33:41.750 --> 00:33:43.926 So in the middle you have during music

NOTE Confidence: 0.831140435

00:33:43.926 --> 00:33:46.108 and so it's increased everywhere.

NOTE Confidence: 0.831140435

00:33:46.110 --> 00:33:48.354 But you have any direction between

NOTE Confidence: 0.831140435

00:33:48.354 --> 00:33:50.828 music and non music in this case.

NOTE Confidence: 0.57179818

00:33:53.610 --> 00:33:56.400 Then there is a music.

NOTE Confidence: 0.57179818

00:33:56.400 --> 00:33:57.768 Is there any differences?

NOTE Confidence: 0.57179818

00:33:57.768 --> 00:33:59.136 Also are there like

NOTE Confidence: 0.57179818

00:33:59.136 --> 00:34:00.190 connections between other?

NOTE Confidence: 0.808012673333333

00:34:03.280 --> 00:34:06.094 No there there is a like the

NOTE Confidence: 0.808012673333333

00:34:06.094 --> 00:34:08.140 it's mostly between like this

NOTE Confidence: 0.808012673333333

00:34:08.140 --> 00:34:11.370 visual cortex like hyper complex.

NOTE Confidence: 0.808012673333333

00:34:11.370 --> 00:34:13.390 I mean the rights against

NOTE Confidence: 0.808012673333333

00:34:13.390 --> 00:34:15.635 like the change in, yeah,

NOTE Confidence: 0.808012673333333

00:34:15.635 --> 00:34:17.630 of the global density of the brain,

NOTE Confidence: 0.808012673333333

00:34:17.630 --> 00:34:22.340 but it's not very like pop up.

NOTE Confidence: 0.734931534375

00:34:24.420 --> 00:34:25.749 On those saving,

NOTE Confidence: 0.734931534375

00:34:25.749 --> 00:34:28.407 there is a processing of social

NOTE Confidence: 0.734931534375

00:34:28.407 --> 00:34:31.224 exclusion that you can see on the cortex.

NOTE Confidence: 0.734931534375

00:34:31.224 --> 00:34:33.894 And on the reduced distinction

NOTE Confidence: 0.734931534375

00:34:33.894 --> 00:34:37.349 between self and other and the

NOTE Confidence: 0.734931534375

00:34:37.349 --> 00:34:39.188 posterior singulate cortex.

NOTE Confidence: 0.734931534375

00:34:39.190 --> 00:34:40.348 So I put that all together.

NOTE Confidence: 0.734931534375

00:34:40.350 --> 00:34:41.808 It's not exactly the same topic,

NOTE Confidence: 0.734931534375

00:34:41.810 --> 00:34:44.848 but just to say that it can

NOTE Confidence: 0.734931534375

00:34:44.850 --> 00:34:47.730 corresponds to this feeling of like

NOTE Confidence: 0.734931534375

00:34:47.730 --> 00:34:49.650 connectedness with the environment.

NOTE Confidence: 0.734931534375

00:34:49.650 --> 00:34:52.000 Yeah, ours.

NOTE Confidence: 0.734931534375

00:34:52.000 --> 00:34:53.120 Like you think that

NOTE Confidence: 0.736148826

00:34:53.370 --> 00:34:54.530 was sort of like the?

NOTE Confidence: 0.63991158375

00:34:57.500 --> 00:34:58.920 Like potentially like the

NOTE Confidence: 0.63991158375

00:34:58.920 --> 00:35:00.340 Pro social effect vaccine.

NOTE Confidence: 0.761759014444445

00:35:00.600 --> 00:35:01.563 Yeah. So yeah.

NOTE Confidence: 0.761759014444445

00:35:01.563 --> 00:35:04.696 So I would I would talk about like the

NOTE Confidence: 0.761759014444445

00:35:04.696 --> 00:35:07.108 like the link between behavior and.

NOTE Confidence: 0.761759014444445

00:35:07.110 --> 00:35:09.162 So, but in fact it's not so easy to

NOTE Confidence: 0.761759014444445

00:35:09.162 --> 00:35:11.566 find the neural correlate of the solution,

NOTE Confidence: 0.761759014444445

00:35:11.570 --> 00:35:14.090 probably because it's a big entity that's

NOTE Confidence: 0.761759014444445

00:35:14.090 --> 00:35:18.997 very different aspect of the experience of.

NOTE Confidence: 0.761759014444445

00:35:19.000 --> 00:35:20.760 Business. So for social inclusion,

NOTE Confidence: 0.761759014444445

00:35:20.760 --> 00:35:21.968 what do they use?

NOTE Confidence: 0.761759014444445

00:35:21.968 --> 00:35:23.712 So the user, you know,

NOTE Confidence: 0.761759014444445

00:35:23.712 --> 00:35:26.208 this disable paradigm whereby people were

NOTE Confidence: 0.767092913333333

00:35:27.280 --> 00:35:28.736 and there we have a question in the

NOTE Confidence: 0.767092913333333

00:35:28.736 --> 00:35:31.050 chat, what kind of music was it?

NOTE Confidence: 0.6826704825

00:35:31.240 --> 00:35:32.335 Oh, and general.

NOTE Confidence: 0.6826704825

00:35:32.335 --> 00:35:35.150 So in this case exactly, I don't know.

NOTE Confidence: 0.6826704825

00:35:35.150 --> 00:35:36.800 But they use a playlist

NOTE Confidence: 0.6826704825

00:35:36.800 --> 00:35:38.010 that is quite control.

NOTE Confidence: 0.6826704825

00:35:38.010 --> 00:35:40.210 So in the playlist there is Electro music,

NOTE Confidence: 0.6826704825

00:35:40.210 --> 00:35:41.650 classic music and it's like,

NOTE Confidence: 0.6826704825

00:35:41.650 --> 00:35:44.866 but it's a kind of control.

NOTE Confidence: 0.6826704825

00:35:44.870 --> 00:35:46.098 In the clinical trials,

NOTE Confidence: 0.568878696

00:35:46.110 --> 00:35:48.050 the same the Hopkins playlist,

NOTE Confidence: 0.568878696

00:35:48.050 --> 00:35:48.960 the same one they use.

NOTE Confidence: 0.838114426

00:35:49.370 --> 00:35:51.858 I I'm not 100% sure that they use

NOTE Confidence: 0.838114426

00:35:51.858 --> 00:35:54.357 this very playlist in in this case,

NOTE Confidence: 0.838114426

00:35:54.360 --> 00:35:56.005 but this is a very good question.

NOTE Confidence: 0.838114426

00:35:56.010 --> 00:35:57.078 But I think it's the same.

NOTE Confidence: 0.838114426

00:35:57.080 --> 00:35:58.868 It's the same team, so it's

NOTE Confidence: 0.838114426

00:35:58.868 --> 00:36:00.890 probably the same kind of right? But

NOTE Confidence: 0.870584653333333

00:36:00.900 --> 00:36:03.126 it's not words and it's not.

NOTE Confidence: 0.84274507

00:36:04.570 --> 00:36:07.209 I don't know if there is no,

NOTE Confidence: 0.84274507

00:36:07.210 --> 00:36:09.471 maybe the place somewhere on the on

NOTE Confidence: 0.84274507

00:36:09.471 --> 00:36:10.969 the supplementary information that I

NOTE Confidence: 0.84274507

00:36:10.969 --> 00:36:13.060 don't have like the the lyrics. Sorry.

NOTE Confidence: 0.754479112857143

00:36:15.680 --> 00:36:18.300 There is also a decreased

NOTE Confidence: 0.754479112857143

00:36:18.300 --> 00:36:19.348 surprise processing,

NOTE Confidence: 0.754479112857143

00:36:19.350 --> 00:36:22.200 so a decreased mismatch negativity,

NOTE Confidence: 0.754479112857143

00:36:22.200 --> 00:36:25.032 that is this wave that appears when you

NOTE Confidence: 0.754479112857143

00:36:25.032 --> 00:36:28.056 have a sequence and and when you are

NOTE Confidence: 0.754479112857143

00:36:28.060 --> 00:36:31.434 processing a deviant team within a sequence.

NOTE Confidence: 0.754479112857143

00:36:31.440 --> 00:36:34.116 So this is decreased on the sybian

NOTE Confidence: 0.754479112857143

00:36:34.116 --> 00:36:35.820 and quite intriguingly, it's.

NOTE Confidence: 0.754479112857143

00:36:35.820 --> 00:36:38.304 It's even like it seems to be more pronounced

NOTE Confidence: 0.754479112857143

00:36:38.304 --> 00:36:40.666 for standard than deviant stimuli here,

NOTE Confidence: 0.754479112857143

00:36:40.666 --> 00:36:43.627 but it's only for tactile and it

NOTE Confidence: 0.754479112857143

00:36:43.627 --> 00:36:47.300 was not found for. Auditory system.

NOTE Confidence: 0.754479112857143

00:36:47.300 --> 00:36:49.370 Whereas for LSD it was finding

NOTE Confidence: 0.754479112857143

00:36:49.370 --> 00:36:50.750 the very classical overall,

NOTE Confidence: 0.754479112857143

00:36:50.750 --> 00:36:51.722 uh, paradigm, uh,

NOTE Confidence: 0.754479112857143

00:36:51.722 --> 00:36:53.990 where you are just a different tone

NOTE Confidence: 0.754479112857143

00:36:54.056 --> 00:36:56.304 and you can see that there is this

NOTE Confidence: 0.754479112857143

00:36:56.304 --> 00:36:57.594 decrease in mismatch negativity

NOTE Confidence: 0.754479112857143

00:36:57.594 --> 00:36:59.904 with the rain red red line that

NOTE Confidence: 0.754479112857143

00:36:59.904 --> 00:37:02.030 is not showing this since it's.

NOTE Confidence: 0.91527589

00:37:04.670 --> 00:37:08.810 OK. So I would just.

NOTE Confidence: 0.91527589

00:37:08.810 --> 00:37:11.298 Just shows a few data showing that it's

NOTE Confidence: 0.91527589

00:37:11.298 --> 00:37:13.503 it's it's probably all these effects

NOTE Confidence: 0.91527589

00:37:13.503 --> 00:37:15.821 probably depend on the five receptors

NOTE Confidence: 0.91527589

00:37:15.821 --> 00:37:18.287 because it could be also independent.

NOTE Confidence: 0.91527589

00:37:18.290 --> 00:37:20.490 But in fact Ketanserin,

NOTE Confidence: 0.91527589

00:37:20.490 --> 00:37:24.706 which is an antagonist of a further 2A,

NOTE Confidence: 0.91527589

00:37:24.706 --> 00:37:27.226 blocks many neural and behavioral

NOTE Confidence: 0.91527589

00:37:27.226 --> 00:37:29.209 effects of psychedelics.

NOTE Confidence: 0.91527589

00:37:29.210 --> 00:37:32.276 So here you can see that the

NOTE Confidence: 0.91527589

00:37:32.276 --> 00:37:34.760 contrast between LSD and placebo.

NOTE Confidence: 0.91527589

00:37:34.760 --> 00:37:37.070 Show pretty much the same

NOTE Confidence: 0.91527589

00:37:37.070 --> 00:37:39.546 pattern of differences as the

NOTE Confidence: 0.91527589

00:37:39.546 --> 00:37:43.950 contrast between LSD and LSD.

NOTE Confidence: 0.91527589

00:37:43.950 --> 00:37:45.824 Here it's the same ID, so uh,

NOTE Confidence: 0.91527589

00:37:45.824 --> 00:37:47.996 with ketanserin plus iOS call you,

NOTE Confidence: 0.91527589

00:37:48.000 --> 00:37:50.610 you have no more the decrease in the alpha

NOTE Confidence: 0.91527589

00:37:50.610 --> 00:37:52.879 that you could see with iOS scalone.

NOTE Confidence: 0.91527589

00:37:52.880 --> 00:37:54.854 And this has been shown in several

NOTE Confidence: 0.91527589

00:37:54.854 --> 00:37:56.860 studies that I will not list here,

NOTE Confidence: 0.91527589

00:37:56.860 --> 00:37:59.948 but it was regularly used and showed that

NOTE Confidence: 0.91527589

00:37:59.948 --> 00:38:02.600 it antagonized pretty much all the effects.

NOTE Confidence: 0.91527589

00:38:02.600 --> 00:38:05.730 Another way to check that.

NOTE Confidence: 0.91527589

00:38:05.730 --> 00:38:08.076 Involved in the effects of the

NOTE Confidence: 0.91527589

00:38:08.080 --> 00:38:10.873 of the psychedelic is to use the

NOTE Confidence: 0.91527589

00:38:10.873 --> 00:38:13.560 gene expression map and to see

NOTE Confidence: 0.91527589

00:38:13.560 --> 00:38:15.905 whether this gene expression map

NOTE Confidence: 0.91527589

00:38:15.905 --> 00:38:17.478 corresponds to the subjective,

NOTE Confidence: 0.91527589

00:38:17.478 --> 00:38:19.674 sorry to the to the neural

NOTE Confidence: 0.91527589

00:38:19.674 --> 00:38:21.009 effects in this case.

NOTE Confidence: 0.91527589

00:38:21.010 --> 00:38:22.170 So that is so.

NOTE Confidence: 0.91527589

00:38:22.170 --> 00:38:25.096 What you can see is there is kind of

NOTE Confidence: 0.91527589

00:38:25.096 --> 00:38:27.316 similarity in the expression map and

NOTE Confidence: 0.91527589

00:38:27.316 --> 00:38:30.210 the change in global brain connectivity

NOTE Confidence: 0.91527589

00:38:30.210 --> 00:38:33.792 observed under LSD and you can also

NOTE Confidence: 0.91527589

00:38:33.792 --> 00:38:36.403 correlate these maps across the time.

NOTE Confidence: 0.91527589

00:38:36.403 --> 00:38:39.370 So this is what the this thing did uh,

NOTE Confidence: 0.91527589

00:38:39.370 --> 00:38:40.630 with silybin on the right.

NOTE Confidence: 0.91527589

00:38:40.630 --> 00:38:42.961 And what you can see is that there is

NOTE Confidence: 0.91527589

00:38:42.961 --> 00:38:44.975 an increase of correlation between

NOTE Confidence: 0.91527589

00:38:44.975 --> 00:38:47.080 the neural effects of silybin

NOTE Confidence: 0.91527589

00:38:47.080 --> 00:38:49.826 and the 5H2 receptor gene map,

NOTE Confidence: 0.91527589

00:38:49.826 --> 00:38:52.396 whereas there is an inspiration

NOTE Confidence: 0.91527589

00:38:52.396 --> 00:38:55.290 for the 1A receptor map which is

NOTE Confidence: 0.91527589

00:38:55.290 --> 00:38:57.900 supposedly like as an opposite effect.

NOTE Confidence: 0.744754138571429

00:38:58.630 --> 00:39:00.550 There's a comment in the chat that gets

NOTE Confidence: 0.744754138571429

00:39:00.550 --> 00:39:02.108 answered isn't fully selected for two,

NOTE Confidence: 0.744754138571429

00:39:02.110 --> 00:39:04.750 and there is a more selective 1 available,

NOTE Confidence: 0.97899743

00:39:06.780 --> 00:39:10.000 MDL 100907. You know if anyone is

NOTE Confidence: 0.97899743

00:39:10.000 --> 00:39:11.760 following up with the more selective and

NOTE Confidence: 0.633108734444444

00:39:12.220 --> 00:39:14.686 I didn't see a study using

NOTE Confidence: 0.633108734444444

00:39:14.686 --> 00:39:15.919 a different antagonist,

NOTE Confidence: 0.633108734444444

00:39:15.920 --> 00:39:17.400 this is the one that is mostly used,

NOTE Confidence: 0.633108734444444

00:39:17.400 --> 00:39:19.740 but maybe there are like.

NOTE Confidence: 0.633108734444444

00:39:19.740 --> 00:39:22.702 Yeah. And and finally,

NOTE Confidence: 0.633108734444444

00:39:22.702 --> 00:39:26.572 you can also simulate what would be an

NOTE Confidence: 0.633108734444444

00:39:26.572 --> 00:39:31.380 excitatory gain modulation obtained by 5.

NOTE Confidence: 0.633108734444444

00:39:31.380 --> 00:39:33.435 Activation and you can reproduce

NOTE Confidence: 0.633108734444444

00:39:33.435 --> 00:39:35.079 again the empirical data.

NOTE Confidence: 0.633108734444444

00:39:35.080 --> 00:39:37.019 So you can see that there is

NOTE Confidence: 0.633108734444444

00:39:37.019 --> 00:39:38.314 a nice correlation between

NOTE Confidence: 0.633108734444444

00:39:38.314 --> 00:39:40.294 empirical change in global brain

NOTE Confidence: 0.633108734444444

00:39:40.294 --> 00:39:44.170 connectivity and the model changes.

NOTE Confidence: 0.633108734444444

00:39:44.170 --> 00:39:48.450 OK. So now I returned from rent

NOTE Confidence: 0.633108734444444

00:39:48.450 --> 00:39:51.340 recognition and So what I will try,

NOTE Confidence: 0.633108734444444

00:39:51.340 --> 00:39:53.614 but it's more hypothetical is to

NOTE Confidence: 0.633108734444444

00:39:53.614 --> 00:39:55.954 predict how what kind of cognitive

NOTE Confidence: 0.633108734444444

00:39:55.954 --> 00:39:58.930 effects we can have by the brain effects

NOTE Confidence: 0.633108734444444

00:39:59.009 --> 00:40:01.259 that we just have seen together.

NOTE Confidence: 0.633108734444444

00:40:01.260 --> 00:40:04.291 So the first part is about the

NOTE Confidence: 0.633108734444444

00:40:04.291 --> 00:40:07.384 reduction of the the the connectivity

NOTE Confidence: 0.633108734444444

00:40:07.384 --> 00:40:10.209 in the default mode network.

NOTE Confidence: 0.633108734444444

00:40:10.210 --> 00:40:13.002 And indeed what we can bet is that

NOTE Confidence: 0.633108734444444

00:40:13.002 --> 00:40:15.609 this change in connectivity can give

NOTE Confidence: 0.633108734444444

00:40:15.610 --> 00:40:17.332 the so-called equity solution or maybe

NOTE Confidence: 0.633108734444444

00:40:17.332 --> 00:40:19.643 you will be less self focused and

NOTE Confidence: 0.633108734444444

00:40:19.643 --> 00:40:21.493 more available to process external

NOTE Confidence: 0.633108734444444

00:40:21.493 --> 00:40:23.073 information because you have a

NOTE Confidence: 0.633108734444444

00:40:23.073 --> 00:40:24.639 deactivation of the of the default

NOTE Confidence: 0.633108734444444

00:40:24.639 --> 00:40:27.740 mode network that will be disrupted.

NOTE Confidence: 0.633108734444444

00:40:27.740 --> 00:40:29.520 The increased connectivity between

NOTE Confidence: 0.633108734444444

00:40:29.520 --> 00:40:31.745 network and the increased complexity

NOTE Confidence: 0.633108734444444

00:40:31.745 --> 00:40:34.287 slash diversity slash repertoire may

NOTE Confidence: 0.633108734444444

00:40:34.287 --> 00:40:36.922 corresponds to a more information

NOTE Confidence: 0.633108734444444

00:40:36.922 --> 00:40:40.074 sharing across the brain and also

NOTE Confidence: 0.633108734444444

00:40:40.074 --> 00:40:42.454 more fluctuation and more update

NOTE Confidence: 0.633108734444444

00:40:42.454 --> 00:40:45.078 of the content of the brain.

NOTE Confidence: 0.633108734444444

00:40:45.080 --> 00:40:47.360 What has been interpreted by several

NOTE Confidence: 0.633108734444444

00:40:47.360 --> 00:40:49.460 authors at a possible enhanced

NOTE Confidence: 0.633108734444444

00:40:49.460 --> 00:40:51.504 state of consciousness because

NOTE Confidence: 0.633108734444444

00:40:51.504 --> 00:40:53.548 information sharing and complexity

NOTE Confidence: 0.633108734444444

00:40:53.548 --> 00:40:56.339 has been also linked to different

NOTE Confidence: 0.633108734444444

00:40:56.339 --> 00:40:57.665 states of consciousness.

NOTE Confidence: 0.633108734444444

00:40:57.670 --> 00:41:00.120 And we can also think that the

NOTE Confidence: 0.633108734444444

00:41:00.120 --> 00:41:01.170 connectivity between different

NOTE Confidence: 0.633108734444444

00:41:01.170 --> 00:41:04.285 sensory areas can lead to the seizure,

NOTE Confidence: 0.633108734444444

00:41:04.290 --> 00:41:07.090 which is an effect that is regularly

NOTE Confidence: 0.633108734444444

00:41:07.090 --> 00:41:08.710 observed under psychedelic.

NOTE Confidence: 0.820016447058824

00:41:11.110 --> 00:41:12.922 On the other hand,

NOTE Confidence: 0.820016447058824

00:41:12.922 --> 00:41:15.187 so the reduced connectivity in

NOTE Confidence: 0.820016447058824

00:41:15.187 --> 00:41:17.156 associative several region but

NOTE Confidence: 0.820016447058824

00:41:17.156 --> 00:41:19.750 increased in sensory areas and the

NOTE Confidence: 0.820016447058824

00:41:19.750 --> 00:41:22.130 change in this alpha band or feedback.

NOTE Confidence: 0.820016447058824

00:41:22.130 --> 00:41:24.494 And for some molecules in particular

NOTE Confidence: 0.820016447058824

00:41:24.494 --> 00:41:26.556 they always get increased forward

NOTE Confidence: 0.820016447058824

00:41:26.556 --> 00:41:28.626 or the exchange in telemetry

NOTE Confidence: 0.820016447058824

00:41:28.626 --> 00:41:30.600 collectivity change from the LSD.

NOTE Confidence: 0.820016447058824

00:41:30.600 --> 00:41:32.960 All this may lead to so cognitive impairment

NOTE Confidence: 0.820016447058824

00:41:32.960 --> 00:41:35.357 is a really like broad prediction,

NOTE Confidence: 0.820016447058824

00:41:35.360 --> 00:41:37.362 but in fact it has been observed

NOTE Confidence: 0.820016447058824

00:41:37.362 --> 00:41:39.056 under secondary but more maybe

NOTE Confidence: 0.820016447058824

00:41:39.056 --> 00:41:40.986 more specifically to an increased

NOTE Confidence: 0.820016447058824

00:41:40.986 --> 00:41:42.765 sensory processing and maybe to

NOTE Confidence: 0.820016447058824

00:41:42.765 --> 00:41:44.440 less constraints that would be

NOTE Confidence: 0.820016447058824

00:41:44.440 --> 00:41:46.669 applied on this sensory processing.

NOTE Confidence: 0.905500086153846

00:41:48.700 --> 00:41:51.178 So now let's check whether this

NOTE Confidence: 0.905500086153846

00:41:51.178 --> 00:41:53.760 prediction can be observed in the data.

NOTE Confidence: 0.905500086153846

00:41:53.760 --> 00:41:55.368 So first of all,

NOTE Confidence: 0.905500086153846

00:41:55.368 --> 00:41:57.378 not all the neuroimaging studies

NOTE Confidence: 0.905500086153846

00:41:57.378 --> 00:41:59.708 explored the the correlation with

NOTE Confidence: 0.905500086153846

00:41:59.708 --> 00:42:02.028 subjective effect and it's quite

NOTE Confidence: 0.905500086153846

00:42:02.028 --> 00:42:04.438 difficult to prove that all together.

NOTE Confidence: 0.905500086153846

00:42:04.440 --> 00:42:06.360 But many of them explored

NOTE Confidence: 0.905500086153846

00:42:06.360 --> 00:42:08.280 whether a visual experience was

NOTE Confidence: 0.905500086153846

00:42:08.353 --> 00:42:10.577 correlated with several patterns,

NOTE Confidence: 0.905500086153846

00:42:10.580 --> 00:42:12.911 and in particular it has been found

NOTE Confidence: 0.905500086153846

00:42:12.911 --> 00:42:15.440 that the decrease of the N 170 was

NOTE Confidence: 0.905500086153846

00:42:15.440 --> 00:42:16.880 correlated with visual experience.

NOTE Confidence: 0.905500086153846

00:42:16.880 --> 00:42:20.570 So maybe there is less integration

NOTE Confidence: 0.905500086153846

00:42:20.570 --> 00:42:22.415 of visual information.

NOTE Confidence: 0.905500086153846

00:42:22.420 --> 00:42:24.688 That it was correlated to an increased

NOTE Confidence: 0.905500086153846

00:42:24.688 --> 00:42:26.580 activity in visual cortex increased

NOTE Confidence: 0.905500086153846

00:42:26.580 --> 00:42:28.288 connective connectivity between visual

NOTE Confidence: 0.905500086153846

00:42:28.288 --> 00:42:30.800 cortex and the rest of the brain.

NOTE Confidence: 0.905500086153846

00:42:30.800 --> 00:42:32.308 The decrease of alpha

NOTE Confidence: 0.905500086153846

00:42:32.308 --> 00:42:33.816 notably in posterior region,

NOTE Confidence: 0.905500086153846

00:42:33.820 --> 00:42:36.345 so notably those are pertaining

NOTE Confidence: 0.905500086153846

00:42:36.345 --> 00:42:39.696 to the visual cortex of the

NOTE Confidence: 0.905500086153846

00:42:39.696 --> 00:42:41.898 posterior different network.

NOTE Confidence: 0.905500086153846

00:42:41.900 --> 00:42:44.092 The connectivity between the

NOTE Confidence: 0.905500086153846

00:42:44.092 --> 00:42:46.832 telemus and the fusiform gyrus.

NOTE Confidence: 0.905500086153846

00:42:46.840 --> 00:42:49.000 And as I said earlier,

NOTE Confidence: 0.905500086153846

00:42:49.000 --> 00:42:51.184 like more influence of the parade book

NOTE Confidence: 0.905500086153846

00:42:51.184 --> 00:42:53.400 and book Cortex on the visual cortex.

NOTE Confidence: 0.905500086153846

00:42:53.400 --> 00:42:56.920 So all this data is kind of difficult

NOTE Confidence: 0.905500086153846

00:42:56.920 --> 00:42:59.560 to summarize in just one aspect.

NOTE Confidence: 0.905500086153846

00:42:59.560 --> 00:43:02.278 What we can see is that.

NOTE Confidence: 0.905500086153846

00:43:02.280 --> 00:43:04.368 Let's say generally like the change

NOTE Confidence: 0.905500086153846

00:43:04.368 --> 00:43:06.259 in visual cortex and disconnectivity

NOTE Confidence: 0.905500086153846

00:43:06.259 --> 00:43:09.262 seems to be associated with the the

NOTE Confidence: 0.905500086153846

00:43:09.262 --> 00:43:11.309 visual experience under psychedelic.

NOTE Confidence: 0.905500086153846

00:43:11.310 --> 00:43:11.906 The DMT,

NOTE Confidence: 0.905500086153846

00:43:11.906 --> 00:43:12.204 uh,

NOTE Confidence: 0.905500086153846

00:43:12.204 --> 00:43:14.778 there is a decrease of alpha and the

NOTE Confidence: 0.905500086153846

00:43:14.778 --> 00:43:17.280 increase of complexity that was also

NOTE Confidence: 0.905500086153846

00:43:17.280 --> 00:43:19.733 associated with visual experience and

NOTE Confidence: 0.905500086153846

00:43:19.733 --> 00:43:22.048 this change in feedforward feedback.

NOTE Confidence: 0.905500086153846

00:43:22.050 --> 00:43:23.988 And again like in this case,

NOTE Confidence: 0.905500086153846

00:43:23.990 --> 00:43:25.580 it's quite natural to think that

NOTE Confidence: 0.905500086153846

00:43:25.580 --> 00:43:27.229 the increase it corresponds to an

NOTE Confidence: 0.905500086153846

00:43:27.229 --> 00:43:28.317 increase of sensory processing.

NOTE Confidence: 0.792972314

00:43:30.780 --> 00:43:33.490 I got the solution so.

NOTE Confidence: 0.792972314

00:43:33.490 --> 00:43:35.730 What was found in several studies that

NOTE Confidence: 0.792972314

00:43:35.730 --> 00:43:38.041 it was correlated with the decreased

NOTE Confidence: 0.792972314

00:43:38.041 --> 00:43:40.084 alpha regulatory activity, and notably

NOTE Confidence: 0.792972314

00:43:40.084 --> 00:43:41.969 in the posterior cingulate cortex,

NOTE Confidence: 0.792972314

00:43:41.970 --> 00:43:43.986 which is part of the default network.

NOTE Confidence: 0.792972314

00:43:43.990 --> 00:43:47.504 So This is why it makes sense.

NOTE Confidence: 0.792972314

00:43:47.510 --> 00:43:49.610 But there were also, like many other

NOTE Confidence: 0.792972314

00:43:49.610 --> 00:43:51.659 correlate of the euro dissolution that

NOTE Confidence: 0.792972314

00:43:51.659 --> 00:43:53.843 are quite difficult to put together.

NOTE Confidence: 0.792972314

00:43:53.850 --> 00:43:55.209 So, for example,

NOTE Confidence: 0.792972314

00:43:55.209 --> 00:43:57.927 a disintegration of the salience network,

NOTE Confidence: 0.792972314

00:43:57.930 --> 00:43:59.430 a disconnection between the parietal

NOTE Confidence: 0.792972314

00:43:59.430 --> 00:44:01.250 lobes and the medial temporal lobes,

NOTE Confidence: 0.792972314

00:44:01.250 --> 00:44:03.250 decreased connectivity between parapro

NOTE Confidence: 0.792972314

00:44:03.250 --> 00:44:05.250 campus and retrosplenial cortex,

NOTE Confidence: 0.792972314

00:44:05.250 --> 00:44:07.290 change of increase of salience

NOTE Confidence: 0.792972314

00:44:07.290 --> 00:44:08.106 network connectivity.

NOTE Confidence: 0.792972314

00:44:08.110 --> 00:44:12.506 So many, many correlates that are not

NOTE Confidence: 0.792972314

00:44:12.506 --> 00:44:16.338 obviously a linkable to these effects.

NOTE Confidence: 0.792972314

00:44:16.340 --> 00:44:20.498 And regarding the overall subjective effects,

NOTE Confidence: 0.792972314

00:44:20.500 --> 00:44:22.452 the decreased network integrity

NOTE Confidence: 0.792972314

00:44:22.452 --> 00:44:24.404 and segregation was correlated

NOTE Confidence: 0.792972314

00:44:24.404 --> 00:44:26.915 to that and also connectivity

NOTE Confidence: 0.792972314

00:44:26.915 --> 00:44:29.860 with the somatomotor region, so.

NOTE Confidence: 0.792972314

00:44:29.860 --> 00:44:33.476 This is also quite, let's say,

NOTE Confidence: 0.792972314

00:44:33.476 --> 00:44:35.116 natural to think that's OK.

NOTE Confidence: 0.792972314

00:44:35.120 --> 00:44:37.232 When you when you change the the the

NOTE Confidence: 0.792972314

00:44:37.232 --> 00:44:39.320 integration of information across the brain,

NOTE Confidence: 0.792972314

00:44:39.320 --> 00:44:40.850 you will have this subjective effect.

NOTE Confidence: 0.684731414545455

00:44:41.860 --> 00:44:44.513 But they they could simply be correlated

NOTE Confidence: 0.684731414545455

00:44:44.513 --> 00:44:46.790 with the intensity effect specifically

NOTE Confidence: 0.8595364

00:44:46.800 --> 00:44:49.178 exactly in this in this study, it was

NOTE Confidence: 0.8595364

00:44:49.178 --> 00:44:51.648 not correlated to specific substrate.

NOTE Confidence: 0.901278804285714

00:44:53.770 --> 00:44:55.738 I mean it would be interested to, yeah,

NOTE Confidence: 0.901278804285714

00:44:55.738 --> 00:44:57.482 yeah, it would be interesting to have to

NOTE Confidence: 0.901278804285714

00:44:57.482 --> 00:44:59.107 have something that is more specific,

NOTE Confidence: 0.901278804285714

00:44:59.110 --> 00:45:00.772 but also all these phenomena are

NOTE Confidence: 0.901278804285714

00:45:00.772 --> 00:45:02.310 probably correlated one to another,

NOTE Confidence: 0.901278804285714

00:45:02.310 --> 00:45:04.704 so it's difficult to to separate them.

NOTE Confidence: 0.788969192

00:45:06.780 --> 00:45:10.212 Regarding emotions and mood.

NOTE Confidence: 0.788969192

00:45:10.212 --> 00:45:14.808 So we saw this decreased brain response to

NOTE Confidence: 0.788969192

00:45:14.808 --> 00:45:17.682 negative emotional stimuli and and this

NOTE Confidence: 0.788969192

00:45:17.682 --> 00:45:21.190 could lead to a bias toward positive emotion.

NOTE Confidence: 0.788969192

00:45:21.190 --> 00:45:23.950 And in fact it was not.

NOTE Confidence: 0.788969192

00:45:23.950 --> 00:45:26.646 It was found, but maybe not as expected.

NOTE Confidence: 0.788969192

00:45:26.650 --> 00:45:29.290 So here you can see that the decrease.

NOTE Confidence: 0.788969192

00:45:29.290 --> 00:45:31.838 So there is this decrease in the

NOTE Confidence: 0.788969192

00:45:31.838 --> 00:45:34.415 amygdala for negative that is more

NOTE Confidence: 0.788969192

00:45:34.415 --> 00:45:36.395 important than for neutral.

NOTE Confidence: 0.788969192

00:45:36.400 --> 00:45:40.048 Uh stimuli and and uh the reaction time

NOTE Confidence: 0.788969192

00:45:40.048 --> 00:45:44.197 that you can see uh uh under is increased,

NOTE Confidence: 0.788969192

00:45:44.200 --> 00:45:45.744 but it seems to be increased for everything.

NOTE Confidence: 0.788969192

00:45:45.750 --> 00:45:47.300 So negative, neutral and shapes.

NOTE Confidence: 0.788969192

00:45:47.300 --> 00:45:48.637 That is the control in these studies.

NOTE Confidence: 0.788969192

00:45:48.640 --> 00:45:53.536 So not very specific to an emotional aspect.

NOTE Confidence: 0.788969192

00:45:53.540 --> 00:45:53.934 Unfortunately,

NOTE Confidence: 0.788969192

00:45:53.934 --> 00:45:56.298 let's say or in other study,

NOTE Confidence: 0.788969192

00:45:56.300 --> 00:45:58.760 there is some specific bias

NOTE Confidence: 0.788969192

00:45:58.760 --> 00:46:00.236 toward positive emotion.

NOTE Confidence: 0.788969192

00:46:00.240 --> 00:46:05.424 So in this case it's like the the error

NOTE Confidence: 0.788969192

00:46:05.424 --> 00:46:07.339 rate in recognizing emotional faces.

NOTE Confidence: 0.788969192

00:46:07.339 --> 00:46:09.900 So what you can see is that there

NOTE Confidence: 0.788969192

00:46:09.900 --> 00:46:11.440 is more error for negative,

NOTE Confidence: 0.788969192

00:46:11.440 --> 00:46:14.800 so it's negative emotion is less recognized.

NOTE Confidence: 0.788969192

00:46:14.800 --> 00:46:17.158 And in this study also you can see that

NOTE Confidence: 0.788969192

00:46:17.158 --> 00:46:19.686 there is less recognition for fearful faces.

NOTE Confidence: 0.788969192

00:46:19.690 --> 00:46:22.048 You don't have it for other,

NOTE Confidence: 0.788969192

00:46:22.050 --> 00:46:24.150 it's not significant for the other emotions.

NOTE Confidence: 0.788969192

00:46:24.150 --> 00:46:27.054 And in this study they used 2 doses

NOTE Confidence: 0.788969192

00:46:27.054 --> 00:46:29.702 of LSD and there is not apparently

NOTE Confidence: 0.788969192

00:46:29.702 --> 00:46:32.414 a dose effect for this aspect.

NOTE Confidence: 0.854157456190476

00:46:34.540 --> 00:46:37.236 And what we may be interested in in

NOTE Confidence: 0.854157456190476

00:46:37.236 --> 00:46:39.336 particular as as psychiatrist as I

NOTE Confidence: 0.854157456190476

00:46:39.336 --> 00:46:41.780 am is the positive effect on mood.

NOTE Confidence: 0.854157456190476

00:46:41.780 --> 00:46:44.795 And for that even in the first study we

NOTE Confidence: 0.854157456190476

00:46:44.795 --> 00:46:48.099 have a significant positive effect on mood.

NOTE Confidence: 0.854157456190476

00:46:48.100 --> 00:46:50.900 And in the second one too that is

NOTE Confidence: 0.854157456190476

00:46:50.900 --> 00:46:52.964 like associated with stellar sibling

NOTE Confidence: 0.854157456190476

00:46:52.964 --> 00:46:55.538 index or in Africa controls here.

NOTE Confidence: 0.854157456190476

00:46:55.540 --> 00:46:57.990 And what you can see is that

NOTE Confidence: 0.854157456190476

00:46:57.990 --> 00:47:00.039 this positive effect change is

NOTE Confidence: 0.854157456190476

00:47:00.039 --> 00:47:02.339 correlated to the enterable change.

NOTE Confidence: 0.854157456190476

00:47:02.340 --> 00:47:03.720 So this is quite a.

NOTE Confidence: 0.854157456190476

00:47:03.720 --> 00:47:06.464 Grievance and are quite nice to see that

NOTE Confidence: 0.854157456190476

00:47:06.464 --> 00:47:09.474 it could be a like one of the neural

NOTE Confidence: 0.854157456190476

00:47:09.474 --> 00:47:11.658 substrates of this of this improvement.

NOTE Confidence: 0.732677936666667

00:47:11.960 --> 00:47:15.566 There's a comment in the chat.

NOTE Confidence: 0.732677936666667

00:47:15.570 --> 00:47:17.922 That the. Pointing out that these

NOTE Confidence: 0.732677936666667

00:47:17.922 --> 00:47:20.570 are all in healthy controls exactly,

NOTE Confidence: 0.732677936666667

00:47:20.570 --> 00:47:22.368 or perhaps general population.

NOTE Confidence: 0.732677936666667

00:47:22.370 --> 00:47:24.338 So it's possible that these would

NOTE Confidence: 0.732677936666667

00:47:24.338 --> 00:47:25.442 be qualitatively different findings

NOTE Confidence: 0.732677936666667

00:47:25.442 --> 00:47:26.858 into test subjects or in another.

NOTE Confidence: 0.676314146

00:47:27.490 --> 00:47:29.850 Thank you for this transition.

NOTE Confidence: 0.676314146

00:47:29.850 --> 00:47:33.119 So I'm going to the to the

NOTE Confidence: 0.676314146

00:47:33.119 --> 00:47:34.053 antidepressant effect.

NOTE Confidence: 0.676314146

00:47:34.060 --> 00:47:35.248 And uh, overall, uh,

NOTE Confidence: 0.676314146

00:47:35.248 --> 00:47:37.030 what was found is that the

NOTE Confidence: 0.676314146

00:47:37.102 --> 00:47:38.950 changes in magnitude were

NOTE Confidence: 0.676314146

00:47:38.950 --> 00:47:40.798 also alleviating depression in

NOTE Confidence: 0.676314146

00:47:40.798 --> 00:47:42.490 participant with depression.

NOTE Confidence: 0.475956620571429

00:47:43.950 --> 00:47:45.462 Just another comment please.

NOTE Confidence: 0.475956620571429

00:47:45.462 --> 00:47:46.596 Are acute effects.

NOTE Confidence: 0.7204687475

00:47:49.190 --> 00:47:49.698 There's a bit of

NOTE Confidence: 0.7622667

00:47:49.880 --> 00:47:52.370 yeah, everything is acute I so

NOTE Confidence: 0.7622667

00:47:52.370 --> 00:47:54.605 there are several studies showing

NOTE Confidence: 0.7622667

00:47:54.605 --> 00:47:57.075 studying effects after one week,

NOTE Confidence: 0.7622667

00:47:57.080 --> 00:47:58.646 but I did not detail by

NOTE Confidence: 0.7622667

00:47:58.646 --> 00:48:00.409 mean I have like with time,

NOTE Confidence: 0.7622667

00:48:00.410 --> 00:48:01.718 so I did not detail everything.

NOTE Confidence: 0.7622667

00:48:01.720 --> 00:48:06.207 So this is really for acute effects.

NOTE Confidence: 0.7622667

00:48:06.210 --> 00:48:09.250 So for participants with depression,

NOTE Confidence: 0.7622667

00:48:09.250 --> 00:48:12.141 so quite strangely, there is an increased

NOTE Confidence: 0.7622667

00:48:12.141 --> 00:48:14.549 animal activity during phase processing.

NOTE Confidence: 0.7622667

00:48:14.550 --> 00:48:17.518 So this was interpreted by the others as

NOTE Confidence: 0.7622667

00:48:17.518 --> 00:48:20.807 being a moment where you are confronted,

NOTE Confidence: 0.7622667

00:48:20.810 --> 00:48:23.834 confronted to negative emotion and that it

NOTE Confidence: 0.7622667

00:48:23.834 --> 00:48:27.030 could be still positive for the people.

NOTE Confidence: 0.7622667

00:48:27.030 --> 00:48:29.984 But during rest there is a decreased

NOTE Confidence: 0.7622667

00:48:29.984 --> 00:48:32.200 amygdala activity that was in

NOTE Confidence: 0.7622667

00:48:32.200 --> 00:48:34.390 this study correlated with the

NOTE Confidence: 0.7622667

00:48:34.390 --> 00:48:36.495 improvement that was subsequently.

NOTE Confidence: 0.7622667

00:48:36.495 --> 00:48:38.160 Observed after service.

NOTE Confidence: 0.715679338333333

00:48:41.450 --> 00:48:45.188 There is also a decreased amygdala.

NOTE Confidence: 0.715679338333333

00:48:45.190 --> 00:48:47.755 Even from the personal cortex

NOTE Confidence: 0.715679338333333

00:48:47.755 --> 00:48:49.807 connectivity that was correlated

NOTE Confidence: 0.715679338333333

00:48:49.807 --> 00:48:52.834 with a decrease in ruminations and

NOTE Confidence: 0.715679338333333

00:48:52.834 --> 00:48:56.432 overall what is observed in this study

NOTE Confidence: 0.715679338333333

00:48:56.432 --> 00:48:59.539 where subjects with depression at the

NOTE Confidence: 0.715679338333333

00:48:59.540 --> 00:49:01.130 received signal savings that there

NOTE Confidence: 0.715679338333333

00:49:01.130 --> 00:49:03.024 is a better emotion recognition after

NOTE Confidence: 0.715679338333333

00:49:03.024 --> 00:49:04.774 the the the intake that is correlated

NOTE Confidence: 0.715679338333333

00:49:04.774 --> 00:49:06.488 with the improvement of the mood.

NOTE Confidence: 0.81704183

00:49:07.740 --> 00:49:09.810 When you say after is this.

NOTE Confidence: 0.74829128

00:49:10.860 --> 00:49:12.216 During these days, uh,

NOTE Confidence: 0.74829128

00:49:12.216 --> 00:49:15.300 in it's one week after I think I'm, yeah.

NOTE Confidence: 0.74829128

00:49:15.300 --> 00:49:16.830 Well beyond the period. It's.

NOTE Confidence: 0.74829128

00:49:16.830 --> 00:49:18.830 Yeah. It's their ability to

NOTE Confidence: 0.74829128

00:49:18.830 --> 00:49:20.430 recognize after the treatment.

NOTE Confidence: 0.74829128

00:49:20.430 --> 00:49:22.218 Yes, it's not during the treatment.

NOTE Confidence: 0.761413676666667

00:49:25.440 --> 00:49:28.110 So there there are two studies

NOTE Confidence: 0.761413676666667

00:49:28.110 --> 00:49:30.362 exploring how network integration

NOTE Confidence: 0.761413676666667

00:49:30.362 --> 00:49:34.332 changes the sailor saving could play a

NOTE Confidence: 0.761413676666667

00:49:34.332 --> 00:49:36.877 role in this antidepressant effects.

NOTE Confidence: 0.761413676666667

00:49:36.880 --> 00:49:39.080 So the first one we showed that there

NOTE Confidence: 0.761413676666667

00:49:39.080 --> 00:49:41.523 was a an increased connectivity between

NOTE Confidence: 0.761413676666667

00:49:41.523 --> 00:49:44.253 the entire single singular cortex and

NOTE Confidence: 0.761413676666667

00:49:44.323 --> 00:49:46.373 the posterior singulate cortex that

NOTE Confidence: 0.761413676666667

00:49:46.373 --> 00:49:49.045 are part of the respectively that's

NOTE Confidence: 0.761413676666667

00:49:49.045 --> 00:49:52.120 positive network and different network,

NOTE Confidence: 0.761413676666667

00:49:52.120 --> 00:49:54.946 so there is a better integration.

NOTE Confidence: 0.761413676666667

00:49:54.950 --> 00:49:56.735 Between these two regions pertaining

NOTE Confidence: 0.761413676666667

00:49:56.735 --> 00:49:59.341 to two different networks and they also

NOTE Confidence: 0.761413676666667

00:49:59.341 --> 00:50:01.236 studied like the cognitive flexibility,

NOTE Confidence: 0.761413676666667

00:50:01.240 --> 00:50:03.224 they found that both of them were increased.

NOTE Confidence: 0.761413676666667

00:50:03.230 --> 00:50:04.688 But quite strangely,

NOTE Confidence: 0.761413676666667

00:50:04.688 --> 00:50:07.118 these two measures were articulated,

NOTE Confidence: 0.761413676666667

00:50:07.120 --> 00:50:09.150 so the more changing in the connectivity

NOTE Confidence: 0.761413676666667

00:50:09.150 --> 00:50:11.559 and the less improvement in flexibility.

NOTE Confidence: 0.761413676666667

00:50:11.560 --> 00:50:16.187 So it was difficult to understand this

NOTE Confidence: 0.761413676666667

00:50:16.187 --> 00:50:21.020 result. And there is, uh, another um.

NOTE Confidence: 0.761413676666667

00:50:21.020 --> 00:50:23.243 Study uh where uh you can see that the

NOTE Confidence: 0.761413676666667

00:50:23.243 --> 00:50:25.161 higher integration between different

NOTE Confidence: 0.761413676666667

00:50:25.161 --> 00:50:26.964 networks, so the default network,

NOTE Confidence: 0.761413676666667

00:50:26.964 --> 00:50:27.596 executive network,

NOTE Confidence: 0.761413676666667

00:50:27.600 --> 00:50:29.760 salience network that you can see

NOTE Confidence: 0.761413676666667

00:50:29.760 --> 00:50:32.460 in this bar plot and the decrease

NOTE Confidence: 0.761413676666667

00:50:32.460 --> 00:50:34.560 recruitment of the default mode

NOTE Confidence: 0.761413676666667

00:50:34.560 --> 00:50:37.157 network was associated with a better

NOTE Confidence: 0.761413676666667

00:50:37.160 --> 00:50:40.436 outcome of of the depressive symptoms.

NOTE Confidence: 0.761413676666667

00:50:40.440 --> 00:50:42.379 And this seems to be specific to

NOTE Confidence: 0.761413676666667

00:50:42.379 --> 00:50:43.986 the Silo saving treatment because

NOTE Confidence: 0.761413676666667

00:50:43.986 --> 00:50:46.134 in this study they compared with

NOTE Confidence: 0.761413676666667

00:50:46.134 --> 00:50:48.553 the stellar prime and they did not

NOTE Confidence: 0.761413676666667

00:50:48.553 --> 00:50:50.198 observe this change of modularity.

NOTE Confidence: 0.761413676666667

00:50:50.200 --> 00:50:51.632 So what they called.

NOTE Confidence: 0.761413676666667

00:50:51.632 --> 00:50:54.502 If you like to use the inverse

NOTE Confidence: 0.761413676666667

00:50:54.502 --> 00:50:55.778 of integration.

NOTE Confidence: 0.761413676666667

00:50:55.780 --> 00:50:56.230 No,

NOTE Confidence: 0.761413676666667

00:50:56.230 --> 00:50:59.380 I mean yeah you understand so the

NOTE Confidence: 0.761413676666667

00:50:59.380 --> 00:51:02.179 when the network are correlated

NOTE Confidence: 0.761413676666667

00:51:02.179 --> 00:51:05.594 there is a less modularity and

NOTE Confidence: 0.761413676666667

00:51:05.594 --> 00:51:08.078 they find that it was correlated

NOTE Confidence: 0.761413676666667

00:51:08.078 --> 00:51:11.129 to the to the to the outcome.

NOTE Confidence: 0.761413676666667

00:51:11.130 --> 00:51:11.640 OK.

NOTE Confidence: 0.574943902

00:51:11.810 --> 00:51:13.740 Yeah, yeah. In the chat.

NOTE Confidence: 0.574943902

00:51:13.740 --> 00:51:18.290 Sharif so. These are. Let's see.

NOTE Confidence: 0.574943902

00:51:18.290 --> 00:51:20.180 Well, the comment is it's hard

NOTE Confidence: 0.574943902

00:51:20.180 --> 00:51:22.039 to have a placebo control.

NOTE Confidence: 0.724912134

00:51:24.730 --> 00:51:25.870 The changes are you know,

NOTE Confidence: 0.724912134

00:51:25.870 --> 00:51:26.464 they're, they're,

NOTE Confidence: 0.724912134

00:51:26.464 --> 00:51:28.543 they're changes in many of these cases.

NOTE Confidence: 0.724912134

00:51:28.550 --> 00:51:30.536 How much of that is attributable

NOTE Confidence: 0.724912134

00:51:30.536 --> 00:51:32.729 to suicide and versus other aspects

NOTE Confidence: 0.724912134

00:51:32.730 --> 00:51:34.770 of the experience that the patient,

NOTE Confidence: 0.724912134

00:51:34.770 --> 00:51:37.230 which I think is a an incredibly

NOTE Confidence: 0.724912134

00:51:37.230 --> 00:51:40.990 incredible challenge for this entire field,

NOTE Confidence: 0.724912134

00:51:40.990 --> 00:51:42.638 not in clinical outcome

NOTE Confidence: 0.724912134

00:51:42.638 --> 00:51:44.740 studies as well as study.

NOTE Confidence: 0.865008929333333

00:51:46.280 --> 00:51:48.275 It's also like I I'm not sure

NOTE Confidence: 0.865008929333333

00:51:48.275 --> 00:51:50.937 that the the rule is necessary to

NOTE Confidence: 0.865008929333333

00:51:50.937 --> 00:51:53.107 distinguish the like the subjective

NOTE Confidence: 0.865008929333333

00:51:53.107 --> 00:51:55.531 effects or let's say like I'm not

NOTE Confidence: 0.865008929333333

00:51:55.531 --> 00:51:58.256 sure if it's possible to have a

NOTE Confidence: 0.865008929333333

00:51:58.256 --> 00:52:00.666 very good placebo condition indeed.

NOTE Confidence: 0.865008929333333

00:52:00.670 --> 00:52:03.162 And I don't know like let's say

NOTE Confidence: 0.865008929333333

00:52:03.162 --> 00:52:05.470 my practical part is more like OK,

NOTE Confidence: 0.865008929333333

00:52:05.470 --> 00:52:06.685 it's like what you're interested

NOTE Confidence: 0.865008929333333

00:52:06.685 --> 00:52:08.550 in is the is the improvement.

NOTE Confidence: 0.865008929333333

00:52:08.550 --> 00:52:10.654 So of course you don't want to to

NOTE Confidence: 0.865008929333333

00:52:10.654 --> 00:52:12.884 put your patient with the like a

NOTE Confidence: 0.865008929333333

00:52:12.884 --> 00:52:14.786 risk that will be that's correlated

NOTE Confidence: 0.865008929333333

00:52:14.786 --> 00:52:16.300 to these improvements.

NOTE Confidence: 0.865008929333333

00:52:16.300 --> 00:52:19.378 But um, yeah and this is also one of

NOTE Confidence: 0.865008929333333

00:52:19.378 --> 00:52:22.720 the strong attack with to microdosing.

NOTE Confidence: 0.865008929333333

00:52:22.720 --> 00:52:23.820 But in fact yes,

NOTE Confidence: 0.865008929333333

00:52:23.820 --> 00:52:25.876 in all these studies of course people

NOTE Confidence: 0.865008929333333

00:52:25.876 --> 00:52:28.291 knows that they that they were they

NOTE Confidence: 0.865008929333333

00:52:28.291 --> 00:52:30.098 have psychedelic and not a placebo.

NOTE Confidence: 0.865008929333333

00:52:30.100 --> 00:52:30.590 So

NOTE Confidence: 0.687546431428571

00:52:30.720 --> 00:52:32.510 in this case these are

NOTE Confidence: 0.687546431428571

00:52:32.510 --> 00:52:33.575 within subject comparisons.

NOTE Confidence: 0.687546431428571

00:52:33.575 --> 00:52:35.300 So placebo question doesn't arise

NOTE Confidence: 0.687546431428571

00:52:35.300 --> 00:52:38.125 but it does for some of the other

NOTE Confidence: 0.687546431428571

00:52:38.125 --> 00:52:39.513 literature that you've reviewed.

NOTE Confidence: 0.687546431428571

00:52:39.520 --> 00:52:41.134 Think of this as the cordless

NOTE Confidence: 0.687546431428571

00:52:41.134 --> 00:52:42.735 of the overall experience. Yeah.

NOTE Confidence: 0.687546431428571

00:52:42.735 --> 00:52:44.340 Yeah. Significant component.

NOTE Confidence: 0.737187001666667

00:52:44.350 --> 00:52:45.649 Exactly. Yeah. Yeah.

NOTE Confidence: 0.737187001666667

00:52:45.649 --> 00:52:47.751 But I mean, the experience is

NOTE Confidence: 0.737187001666667

00:52:47.751 --> 00:52:49.086 also treated by the component.

NOTE Confidence: 0.737187001666667

00:52:49.090 --> 00:52:50.206 So I don't know if it's

NOTE Confidence: 0.737187001666667

00:52:50.210 --> 00:52:51.960 realistically satisfied.

NOTE Confidence: 0.737187001666667

00:52:51.960 --> 00:52:54.009 Yeah, yeah, exactly.

NOTE Confidence: 0.85726861

00:52:58.860 --> 00:53:00.516 So my last thought, if I have time,

NOTE Confidence: 0.85726861

00:53:00.520 --> 00:53:02.060 is to talk a bit about the

NOTE Confidence: 0.85726861

00:53:02.060 --> 00:53:03.184 theoretical models. It's fine.

NOTE Confidence: 0.85726861

00:53:03.184 --> 00:53:06.300 So, so there are few of them right now.

NOTE Confidence: 0.85726861

00:53:06.300 --> 00:53:08.673 The consequence theory,

NOTE Confidence: 0.85726861

00:53:08.673 --> 00:53:11.638 the relaxed belief under psychedelics,

NOTE Confidence: 0.85726861

00:53:11.640 --> 00:53:14.826 and the cortical posterior cortical models.

NOTE Confidence: 0.85726861

00:53:14.830 --> 00:53:18.659 So we will start with the the

NOTE Confidence: 0.85726861

00:53:18.659 --> 00:53:21.010 corticostriatal dynamic particle theory.

NOTE Confidence: 0.85726861

00:53:21.010 --> 00:53:22.984 So the main idea is that the

NOTE Confidence: 0.85726861

00:53:22.984 --> 00:53:25.080 teams will play a very important

NOTE Confidence: 0.85726861

00:53:25.080 --> 00:53:27.045 role in the psychedelic effects,

NOTE Confidence: 0.85726861

00:53:27.050 --> 00:53:29.600 and in particular it will.

NOTE Confidence: 0.796863066111111

00:53:31.610 --> 00:53:33.486 It, like the telemus,

NOTE Confidence: 0.796863066111111

00:53:33.486 --> 00:53:35.831 normally filter information and other

NOTE Confidence: 0.796863066111111

00:53:35.831 --> 00:53:38.150 psychedelic it will be less able

NOTE Confidence: 0.796863066111111

00:53:38.150 --> 00:53:39.816 to filter information, intercepts,

NOTE Confidence: 0.796863066111111

00:53:39.816 --> 00:53:41.604 even exceptive information.

NOTE Confidence: 0.796863066111111

00:53:41.604 --> 00:53:45.839 And um this uh will lead to um,

NOTE Confidence: 0.796863066111111

00:53:45.840 --> 00:53:48.012 uh kind of flooded uh information

NOTE Confidence: 0.796863066111111

00:53:48.012 --> 00:53:50.189 coming from the the sensory areas

NOTE Confidence: 0.796863066111111

00:53:50.189 --> 00:53:52.813 and it was shown also and I showed

NOTE Confidence: 0.796863066111111

00:53:52.883 --> 00:53:55.505 that before that there was an

NOTE Confidence: 0.796863066111111

00:53:55.505 --> 00:53:57.253 increased connectivity between the

NOTE Confidence: 0.796863066111111

00:53:57.260 --> 00:53:59.606 telemus and the sensory areas whereas

NOTE Confidence: 0.796863066111111

00:53:59.606 --> 00:54:01.794 there is a decreased connectivity

NOTE Confidence: 0.796863066111111

00:54:01.794 --> 00:54:04.549 probably with the associative areas.

NOTE Confidence: 0.796863066111111

00:54:04.550 --> 00:54:06.699 So overall this will the terms will

NOTE Confidence: 0.796863066111111

00:54:06.699 --> 00:54:09.540 be at the origin of this pattern that

NOTE Confidence: 0.796863066111111

00:54:09.540 --> 00:54:12.069 I already showed 2 whereby there is.

NOTE Confidence: 0.796863066111111

00:54:12.070 --> 00:54:14.818 The decreased connectivity for

NOTE Confidence: 0.796863066111111

00:54:14.818 --> 00:54:16.879 the associative areas,

NOTE Confidence: 0.796863066111111

00:54:16.880 --> 00:54:18.500 whereas there is an increased

NOTE Confidence: 0.796863066111111

00:54:18.500 --> 00:54:19.796 connectivity for the sensory

NOTE Confidence: 0.796863066111111

00:54:19.796 --> 00:54:21.475 cortices with the rest of the brain.

NOTE Confidence: 0.796863066111111

00:54:21.480 --> 00:54:24.531 So there will be a kind of switch from

NOTE Confidence: 0.796863066111111

00:54:24.531 --> 00:54:27.492 like a balance where you will have a

NOTE Confidence: 0.796863066111111

00:54:27.492 --> 00:54:30.790 lot of sensory processing and really

NOTE Confidence: 0.796863066111111

00:54:30.790 --> 00:54:32.920 degraded integrative processing.

NOTE Confidence: 0.796863066111111

00:54:32.920 --> 00:54:35.096 And this was fine,

NOTE Confidence: 0.796863066111111

00:54:35.096 --> 00:54:37.130 like with these two maps that

NOTE Confidence: 0.796863066111111

00:54:37.130 --> 00:54:38.770 are quite similar to each other,

NOTE Confidence: 0.796863066111111

00:54:38.770 --> 00:54:39.290 what is

NOTE Confidence: 0.75846021375

00:54:39.300 --> 00:54:41.030 that gap in the middle

NOTE Confidence: 0.75846021375

00:54:41.030 --> 00:54:42.068 lateral prefrontal cortex?

NOTE Confidence: 0.75846021375

00:54:42.070 --> 00:54:43.870 There's an area of prefrontal there.

NOTE Confidence: 0.75846021375

00:54:43.870 --> 00:54:46.518 It is not reduced.

NOTE Confidence: 0.75846021375

00:54:46.520 --> 00:54:49.090 Still. Where? I'm sorry.

NOTE Confidence: 0.83135986

00:54:51.170 --> 00:54:53.128 So you've got this global reduction scroll

NOTE Confidence: 0.83135986

00:54:53.128 --> 00:54:55.080 this association protects. Except there.

NOTE Confidence: 0.69295615

00:54:57.630 --> 00:55:00.060 Uh, I like no,

NOTE Confidence: 0.89740160125

00:55:00.070 --> 00:55:01.430 I don't know what it is exactly that,

NOTE Confidence: 0.89740160125

00:55:01.430 --> 00:55:04.363 but this, so this study were also

NOTE Confidence: 0.89740160125

00:55:04.363 --> 00:55:07.049 correlated with global signal regulation.

NOTE Confidence: 0.89740160125

00:55:07.050 --> 00:55:11.163 So I mean this is the map of statistical.

NOTE Confidence: 0.89740160125

00:55:11.170 --> 00:55:13.114 So it's it's maybe just a threshold effect

NOTE Confidence: 0.89740160125

00:55:13.114 --> 00:55:15.021 and not necessarily something that is

NOTE Confidence: 0.89740160125

00:55:15.021 --> 00:55:17.430 particularly not affected by this one.

NOTE Confidence: 0.89740160125

00:55:17.430 --> 00:55:21.038 Yeah. Yeah, it's really, yeah.

NOTE Confidence: 0.89740160125

00:55:21.040 --> 00:55:21.718 Freeze up and.

NOTE Confidence: 0.8829322125

00:55:25.740 --> 00:55:28.628 So the second model.

NOTE Confidence: 0.8829322125

00:55:28.630 --> 00:55:30.826 So the the main claim is that there is

NOTE Confidence: 0.8829322125

00:55:30.826 --> 00:55:33.103 the under psychedelic there will be

NOTE Confidence: 0.8829322125

00:55:33.103 --> 00:55:35.310 decreased prior and increased bottom up.

NOTE Confidence: 0.8829322125

00:55:35.310 --> 00:55:37.949 So it starts from the irregular excitation

NOTE Confidence: 0.8829322125

00:55:37.949 --> 00:55:41.152 of the of the layer 5 pyramidal neurons

NOTE Confidence: 0.8829322125

00:55:41.152 --> 00:55:43.376 because of the receptor activation.

NOTE Confidence: 0.8829322125

00:55:43.376 --> 00:55:45.428 According to the others,

NOTE Confidence: 0.8829322125

00:55:45.430 --> 00:55:48.830 this is the cause of the decreased power.

NOTE Confidence: 0.8829322125

00:55:48.830 --> 00:55:51.146 Because there is this kind of

NOTE Confidence: 0.8829322125

00:55:51.146 --> 00:55:53.121 desynchronization and thereby less like

NOTE Confidence: 0.8829322125

00:55:53.121 --> 00:55:56.138 the low frequency rhythm would be less

NOTE Confidence: 0.8829322125

00:55:56.138 --> 00:55:58.509 synchronized and therefore decreased.

NOTE Confidence: 0.8829322125

00:55:58.510 --> 00:55:59.680 And this is what is observed,

NOTE Confidence: 0.8829322125

00:55:59.680 --> 00:56:02.270 of course, in the in the literature.

NOTE Confidence: 0.8829322125

00:56:02.270 --> 00:56:05.180 And both of these will lead

NOTE Confidence: 0.8829322125

00:56:05.180 --> 00:56:07.120 to disruption of integrity.

NOTE Confidence: 0.8829322125

00:56:07.120 --> 00:56:09.486 Of last last scale networks and what

NOTE Confidence: 0.8829322125

00:56:09.486 --> 00:56:12.548 we have seen about like this increased

NOTE Confidence: 0.8829322125

00:56:12.548 --> 00:56:16.160 entropy diversity during rest.

NOTE Confidence: 0.8829322125

00:56:16.160 --> 00:56:18.675 And this is also corroborated

NOTE Confidence: 0.8829322125

00:56:18.675 --> 00:56:20.184 by empirical data.

NOTE Confidence: 0.8829322125

00:56:20.190 --> 00:56:22.759 Uh, the other thing that all these

NOTE Confidence: 0.8829322125

00:56:22.759 --> 00:56:25.369 corresponds to a decreased precision of

NOTE Confidence: 0.8829322125

00:56:25.369 --> 00:56:28.458 high level priors or decrease in belief,

NOTE Confidence: 0.8829322125

00:56:28.458 --> 00:56:30.930 because for them like this alpha

NOTE Confidence: 0.8829322125

00:56:31.010 --> 00:56:33.410 rhythm and parameter neuron encodes

NOTE Confidence: 0.8829322125

00:56:33.410 --> 00:56:35.810 the precision of the priors.

NOTE Confidence: 0.8829322125

00:56:35.810 --> 00:56:37.922 So like it's not very easy to to

NOTE Confidence: 0.8829322125

00:56:37.922 --> 00:56:40.574 to to fill this gap between like

NOTE Confidence: 0.8829322125

00:56:40.574 --> 00:56:42.624 the computational aspect and the

NOTE Confidence: 0.8829322125

00:56:42.700 --> 00:56:44.508 like the physical aspects.

NOTE Confidence: 0.8829322125

00:56:44.510 --> 00:56:46.806 But this is what they propose and

NOTE Confidence: 0.8829322125

00:56:46.806 --> 00:56:48.822 the consequence of that would be

NOTE Confidence: 0.8829322125

00:56:48.822 --> 00:56:50.754 that there will be a liberation.

NOTE Confidence: 0.8829322125

00:56:50.760 --> 00:56:54.253 The bottom up information that will slow

NOTE Confidence: 0.8829322125

00:56:54.253 --> 00:56:57.680 and so and also a more as sensibility,

NOTE Confidence: 0.8829322125

00:56:57.680 --> 00:56:59.520 sensitivity to updates and

NOTE Confidence: 0.8829322125

00:56:59.520 --> 00:57:00.900 to prediction error.

NOTE Confidence: 0.8829322125

00:57:00.900 --> 00:57:03.760 So you will have you will be more open to

NOTE Confidence: 0.8829322125

00:57:03.835 --> 00:57:06.559 new information and update your models.

NOTE Confidence: 0.8829322125

00:57:06.560 --> 00:57:08.252 And they propose that this is

NOTE Confidence: 0.8829322125

00:57:08.252 --> 00:57:10.521 one of the crucial aspects of the

NOTE Confidence: 0.8829322125

00:57:10.521 --> 00:57:12.316 therapeutical aspect of this molecule

NOTE Confidence: 0.8829322125

00:57:12.316 --> 00:57:14.797 that you are able to update some rich,

NOTE Confidence: 0.8829322125

00:57:14.800 --> 00:57:16.099 very rigid model,

NOTE Confidence: 0.8829322125

00:57:16.099 --> 00:57:17.398 pathologically rigid model,

NOTE Confidence: 0.8829322125

00:57:17.400 --> 00:57:18.828 for example in depression,

NOTE Confidence: 0.8829322125

00:57:18.828 --> 00:57:19.899 anxiety or addictions.

NOTE Confidence: 0.566183864545454

00:57:22.640 --> 00:57:25.153 And finally there is the classic the

NOTE Confidence: 0.566183864545454

00:57:25.153 --> 00:57:26.640 cortical cluster cortical model.

NOTE Confidence: 0.566183864545454

00:57:26.640 --> 00:57:31.240 So. So this is the classroom,

NOTE Confidence: 0.566183864545454

00:57:31.240 --> 00:57:33.980 and what we know about it is that it is

NOTE Confidence: 0.566183864545454

00:57:34.055 --> 00:57:36.799 that it received input from the corpus.

NOTE Confidence: 0.566183864545454

00:57:36.800 --> 00:57:42.116 It expresses itself also 5H3 receptors.

NOTE Confidence: 0.566183864545454

00:57:42.120 --> 00:57:44.676 And uh, the role of the claustrum is to

NOTE Confidence: 0.566183864545454

00:57:44.676 --> 00:57:47.233 um to allow cortical synchronization and

NOTE Confidence: 0.566183864545454

00:57:47.233 --> 00:57:50.520 also it is activated during task switching.

NOTE Confidence: 0.566183864545454

00:57:50.520 --> 00:57:53.310 So it's a kind of.

NOTE Confidence: 0.566183864545454

00:57:53.310 --> 00:57:57.600 Then leader of different cortical network.

NOTE Confidence: 0.566183864545454

00:57:57.600 --> 00:57:59.826 So you should activate through receptors

NOTE Confidence: 0.566183864545454

00:57:59.826 --> 00:58:02.501 at these two location like the clustering

NOTE Confidence: 0.566183864545454

00:58:02.501 --> 00:58:05.140 directly and also in the prefrontal cortex.

NOTE Confidence: 0.566183864545454

00:58:05.140 --> 00:58:07.204 So the others think that it

NOTE Confidence: 0.566183864545454

00:58:07.204 --> 00:58:08.580 results in a decoupling.

NOTE Confidence: 0.566183864545454

00:58:08.580 --> 00:58:10.470 So it will not be synchronized because

NOTE Confidence: 0.566183864545454

00:58:10.470 --> 00:58:12.358 there will not be like this harmony

NOTE Confidence: 0.566183864545454

00:58:12.358 --> 00:58:14.739 between the two but they will work a bit

NOTE Confidence: 0.566183864545454

00:58:14.739 --> 00:58:16.594 separately and this will lead to aberrant

NOTE Confidence: 0.566183864545454

00:58:16.600 --> 00:58:19.340 cognitive control on network states.

NOTE Confidence: 0.566183864545454

00:58:19.340 --> 00:58:21.604 And in fact overall the the the customer

NOTE Confidence: 0.566183864545454

00:58:21.604 --> 00:58:24.181 will not be able to no more to to do

NOTE Confidence: 0.566183864545454

00:58:24.181 --> 00:58:25.411 these cortical synchronization and

NOTE Confidence: 0.566183864545454

00:58:25.411 --> 00:58:27.798 it will lead to a disruption and.

NOTE Confidence: 0.566183864545454

00:58:27.800 --> 00:58:29.625 And that's simulation of different

NOTE Confidence: 0.566183864545454

00:58:29.625 --> 00:58:31.450 cortical networks that are crucial

NOTE Confidence: 0.566183864545454

00:58:31.505 --> 00:58:32.669 for brain functioning.

NOTE Confidence: 0.566183864545454

00:58:32.670 --> 00:58:34.825 So in particular the different

NOTE Confidence: 0.566183864545454

00:58:34.825 --> 00:58:36.980 network by the continued work.

NOTE Confidence: 0.566183864545454

00:58:36.980 --> 00:58:39.964 And all this is supported by one study.

NOTE Confidence: 0.566183864545454

00:58:39.970 --> 00:58:42.670 So of course the recognizer

NOTE Confidence: 0.566183864545454

00:58:42.670 --> 00:58:44.830 techniques like further replication,

NOTE Confidence: 0.566183864545454

00:58:44.830 --> 00:58:46.058 but in this study,

NOTE Confidence: 0.566183864545454

00:58:46.058 --> 00:58:48.820 so there is a change of connectivity

NOTE Confidence: 0.566183864545454

00:58:48.820 --> 00:58:50.860 between the classroom and

NOTE Confidence: 0.566183864545454

00:58:50.860 --> 00:58:52.624 different different networks,

NOTE Confidence: 0.566183864545454

00:58:52.624 --> 00:58:55.132 in particular the development

NOTE Confidence: 0.566183864545454

00:58:55.132 --> 00:58:57.640 network and the frontal.

NOTE Confidence: 0.566183864545454

00:58:57.640 --> 00:58:58.514 Control, uh,

NOTE Confidence: 0.566183864545454

00:58:58.514 --> 00:59:01.573 network and there is also like change

NOTE Confidence: 0.566183864545454

00:59:01.573 --> 00:59:05.019 per se in the activity of the classroom.

NOTE Confidence: 0.566183864545454

00:59:05.020 --> 00:59:06.928 This isn't healthy.

NOTE Confidence: 0.566183864545454

00:59:06.930 --> 00:59:07.505 Yes,

NOTE Confidence: 0.566183864545454

00:59:07.505 --> 00:59:08.080 yes.

NOTE Confidence: 0.723804322727273

00:59:09.740 --> 00:59:11.756 And how well I know the

NOTE Confidence: 0.723804322727273

00:59:11.756 --> 00:59:13.610 classrooms like 1 voxel thing.

NOTE Confidence: 0.723804322727273

00:59:13.610 --> 00:59:15.062 Like how good is the site

NOTE Confidence: 0.723804322727273

00:59:15.062 --> 00:59:15.788 with modern methods?

NOTE Confidence: 0.723804322727273

00:59:15.790 --> 00:59:16.882 How good is imaging

NOTE Confidence: 0.723804322727273

00:59:16.882 --> 00:59:17.974 imaging in the classroom?

NOTE Confidence: 0.874501021875

00:59:21.720 --> 00:59:23.772 OK, I would like to finish and I I

NOTE Confidence: 0.874501021875

00:59:23.772 --> 00:59:25.876 hope that we may discuss about that.

NOTE Confidence: 0.874501021875

00:59:25.880 --> 00:59:28.256 So I'm coming from the consciousness

NOTE Confidence: 0.874501021875

00:59:28.256 --> 00:59:31.237 field of cognitive science and and I I

NOTE Confidence: 0.874501021875

00:59:31.237 --> 00:59:33.235 get interested in psychedelic because for

NOTE Confidence: 0.874501021875

00:59:33.301 --> 00:59:35.716 me it was quite obvious that subjectively

NOTE Confidence: 0.874501021875

00:59:35.716 --> 00:59:37.968 there will be a strong impact of

NOTE Confidence: 0.874501021875

00:59:37.968 --> 00:59:39.176 psychedelic and conscious perception.

NOTE Confidence: 0.874501021875

00:59:39.180 --> 00:59:41.340 I just want to propose a link between

NOTE Confidence: 0.874501021875

00:59:41.340 --> 00:59:43.463 what I know of conscious perception

NOTE Confidence: 0.874501021875

00:59:43.463 --> 00:59:45.743 and the effect of psychedelic and

NOTE Confidence: 0.874501021875

00:59:45.812 --> 00:59:48.164 like it's also a way to describe maybe

NOTE Confidence: 0.874501021875

00:59:48.164 --> 00:59:50.260 the Rebus a bit differently because.

NOTE Confidence: 0.874501021875

00:59:50.260 --> 00:59:53.608 Many of the premises of this will be common.

NOTE Confidence: 0.874501021875

00:59:53.610 --> 00:59:57.470 So this is the model that I used a lot

NOTE Confidence: 0.874501021875

00:59:57.470 --> 01:00:00.088 to to all my studies on consciousness.

NOTE Confidence: 0.874501021875

01:00:00.090 --> 01:00:01.986 And this is the the model of the

NOTE Confidence: 0.874501021875

01:00:01.986 --> 01:00:03.010 global neuronal workspace.

NOTE Confidence: 0.874501021875

01:00:03.010 --> 01:00:05.509 So the main idea is that consciousness

NOTE Confidence: 0.874501021875

01:00:05.509 --> 01:00:08.367 rely on the activation of a specific

NOTE Confidence: 0.874501021875

01:00:08.370 --> 01:00:12.012 network that corresponds to like the

NOTE Confidence: 0.874501021875

01:00:12.012 --> 01:00:14.440 connection between different brain

NOTE Confidence: 0.874501021875

01:00:14.526 --> 01:00:17.688 area through a long distance neurons.

NOTE Confidence: 0.874501021875

01:00:17.690 --> 01:00:19.916 And the main idea is that.

NOTE Confidence: 0.874501021875

01:00:19.920 --> 01:00:21.138 So all the time you will have,

NOTE Confidence: 0.874501021875

01:00:21.140 --> 01:00:22.708 you will unconsciously process

NOTE Confidence: 0.874501021875

01:00:22.708 --> 01:00:24.668 information and few information will

NOTE Confidence: 0.874501021875

01:00:24.668 --> 01:00:26.803 be amplified in particular by top

NOTE Confidence: 0.874501021875

01:00:26.803 --> 01:00:28.907 down processing to enter this network

NOTE Confidence: 0.874501021875

01:00:28.907 --> 01:00:30.712 and being shared and broadcasted

NOTE Confidence: 0.874501021875

01:00:30.712 --> 01:00:31.795 across the brain.

NOTE Confidence: 0.874501021875

01:00:31.800 --> 01:00:34.356 So it will bring like a kind of huge

NOTE Confidence: 0.874501021875

01:00:34.356 --> 01:00:36.245 activation and this encoding of

NOTE Confidence: 0.874501021875

01:00:36.245 --> 01:00:38.175 information shared by different brain

NOTE Confidence: 0.874501021875

01:00:38.175 --> 01:00:40.482 areas would really corresponds to

NOTE Confidence: 0.874501021875

01:00:40.482 --> 01:00:42.797 conscious perception of this information.

NOTE Confidence: 0.874501021875

01:00:42.800 --> 01:00:43.498 Umm,

NOTE Confidence: 0.874501021875

01:00:43.498 --> 01:00:47.202 and this top down could be linked

NOTE Confidence: 0.874501021875

01:00:47.202 --> 01:00:49.330 to this alpha band or beta band.

NOTE Confidence: 0.874501021875

01:00:49.330 --> 01:00:51.470 And as I said before,

NOTE Confidence: 0.874501021875

01:00:51.470 --> 01:00:53.500 some studies showed that perception

NOTE Confidence: 0.874501021875

01:00:53.500 --> 01:00:57.920 was helped by this particular vendor.

NOTE Confidence: 0.874501021875

01:00:57.920 --> 01:00:58.403 Oscillations.

NOTE Confidence: 0.874501021875

01:00:58.403 --> 01:01:01.784 And so there will be this kind

NOTE Confidence: 0.874501021875

01:01:01.784 --> 01:01:04.119 of broadcasting in this network,

NOTE Confidence: 0.874501021875

01:01:04.120 --> 01:01:04.885 but also filtering.

NOTE Confidence: 0.874501021875

01:01:04.885 --> 01:01:06.670 So there are two roles of this

NOTE Confidence: 0.874501021875

01:01:06.728 --> 01:01:08.408 amplification and of this top

NOTE Confidence: 0.874501021875

01:01:08.408 --> 01:01:09.080 down processing.

NOTE Confidence: 0.874501021875

01:01:09.080 --> 01:01:10.880 First of all to amplify so that you

NOTE Confidence: 0.874501021875

01:01:10.880 --> 01:01:12.661 can perceive and you know that your

NOTE Confidence: 0.874501021875

01:01:12.661 --> 01:01:13.946 attention plays a very important

NOTE Confidence: 0.874501021875

01:01:14.001 --> 01:01:15.357 role in conscious perception,

NOTE Confidence: 0.874501021875

01:01:15.360 --> 01:01:18.648 but also to determine and to

NOTE Confidence: 0.874501021875

01:01:18.648 --> 01:01:22.450 disambiguate what you are exposed to.

NOTE Confidence: 0.874501021875

01:01:22.450 --> 01:01:23.617 And of course,

NOTE Confidence: 0.874501021875

01:01:23.617 --> 01:01:25.562 like this sharing of information

NOTE Confidence: 0.874501021875

01:01:25.562 --> 01:01:27.947 really and like with the pyramidal

NOTE Confidence: 0.874501021875

01:01:27.947 --> 01:01:30.245 neurons and also like just global

NOTE Confidence: 0.874501021875

01:01:30.314 --> 01:01:32.330 connectivity across the brain.

NOTE Confidence: 0.865779436363637

01:01:34.480 --> 01:01:36.538 So if we start with the

NOTE Confidence: 0.865779436363637

01:01:36.538 --> 01:01:38.520 same idea as the Rebus,

NOTE Confidence: 0.865779436363637

01:01:38.520 --> 01:01:42.349 so the activity of the pyramidal neuron

NOTE Confidence: 0.865779436363637

01:01:42.349 --> 01:01:44.760 decrease low frequency rhythm and

NOTE Confidence: 0.865779436363637

01:01:44.760 --> 01:01:46.620 increased inter network connectivity.

NOTE Confidence: 0.865779436363637

01:01:46.620 --> 01:01:49.868 So let's see how this plays a

NOTE Confidence: 0.865779436363637

01:01:49.868 --> 01:01:51.080 role in consciousness.

NOTE Confidence: 0.865779436363637

01:01:51.080 --> 01:01:54.167 So the pyramid on the run have

NOTE Confidence: 0.865779436363637

01:01:54.167 --> 01:01:56.966 been shown to support information

NOTE Confidence: 0.865779436363637

01:01:56.966 --> 01:02:00.223 integration so and to allow

NOTE Confidence: 0.865779436363637

01:02:00.223 --> 01:02:02.275 coincidence detection between external

NOTE Confidence: 0.865779436363637

01:02:02.275 --> 01:02:04.840 data and internal prediction so.

NOTE Confidence: 0.865779436363637

01:02:04.840 --> 01:02:06.790 In fact, the computation between

NOTE Confidence: 0.865779436363637

01:02:06.790 --> 01:02:08.775 priors and and sensory input

NOTE Confidence: 0.865779436363637

01:02:08.775 --> 01:02:10.760 can can also occur directly

NOTE Confidence: 0.865779436363637

01:02:10.836 --> 01:02:12.716 injecting these neurons and not

NOTE Confidence: 0.865779436363637

01:02:12.716 --> 01:02:15.449 necessarily in a in a video area,

NOTE Confidence: 0.865779436363637

01:02:15.450 --> 01:02:17.880 but already at the neural level.

NOTE Confidence: 0.865779436363637

01:02:17.880 --> 01:02:20.268 But it has also been involved

NOTE Confidence: 0.865779436363637

01:02:20.268 --> 01:02:21.462 in conscious computations.

NOTE Confidence: 0.865779436363637

01:02:21.470 --> 01:02:23.030 And indeed there was a study

NOTE Confidence: 0.865779436363637

01:02:23.030 --> 01:02:24.832 showing that if you change the

NOTE Confidence: 0.865779436363637

01:02:24.832 --> 01:02:26.577 calcium activity in the dendrites,

NOTE Confidence: 0.865779436363637

01:02:26.580 --> 01:02:28.890 you can modulate threshold for

NOTE Confidence: 0.865779436363637

01:02:28.890 --> 01:02:31.200 perceptual detection and also that

NOTE Confidence: 0.865779436363637

01:02:31.272 --> 01:02:33.760 anesthesia decouples these neurons.

NOTE Confidence: 0.865779436363637

01:02:33.760 --> 01:02:35.944 And that's it can be one of the

NOTE Confidence: 0.865779436363637

01:02:35.944 --> 01:02:37.857 mechanism through which you lose

NOTE Confidence: 0.865779436363637

01:02:37.857 --> 01:02:39.165 consciousness during anesthesia.

NOTE Confidence: 0.866432583333333

01:02:41.650 --> 01:02:44.312 So as I said, like uh, alpha situation,

NOTE Confidence: 0.866432583333333

01:02:44.312 --> 01:02:47.160 we're shown to carry a part of the

NOTE Confidence: 0.866432583333333

01:02:47.235 --> 01:02:49.959 top down sensory prediction and this

NOTE Confidence: 0.866432583333333

01:02:49.959 --> 01:02:52.229 prediction will change your orientation

NOTE Confidence: 0.866432583333333

01:02:52.229 --> 01:02:55.400 of attention on the external world and

NOTE Confidence: 0.866432583333333

01:02:55.477 --> 01:02:57.890 also help to disambiguate sensor inputs.

NOTE Confidence: 0.866432583333333

01:02:57.890 --> 01:02:59.786 So This is why, for example,

NOTE Confidence: 0.866432583333333

01:02:59.790 --> 01:03:02.490 you can see that this you will have the

NOTE Confidence: 0.866432583333333

01:03:02.490 --> 01:03:04.710 impression that the left circle is convex,

NOTE Confidence: 0.866432583333333

01:03:04.710 --> 01:03:07.230 is convex while the right one is concave.

NOTE Confidence: 0.866432583333333

01:03:07.230 --> 01:03:09.454 And you will be pretty sure about that

NOTE Confidence: 0.866432583333333

01:03:09.454 --> 01:03:11.648 even if there is no like it could.

NOTE Confidence: 0.866432583333333

01:03:11.650 --> 01:03:14.219 Also be like uh the the opposite,

NOTE Confidence: 0.866432583333333

01:03:14.220 --> 01:03:16.411 but just because in general the light

NOTE Confidence: 0.866432583333333

01:03:16.411 --> 01:03:18.515 comes from the from the from the

NOTE Confidence: 0.866432583333333

01:03:18.515 --> 01:03:21.890 sky and not from the ground. Umm.

NOTE Confidence: 0.866432583333333

01:03:21.890 --> 01:03:24.446 And in fact it has been shown in several

NOTE Confidence: 0.866432583333333

01:03:24.446 --> 01:03:26.333 studies that the expectation correspond

NOTE Confidence: 0.866432583333333

01:03:26.333 --> 01:03:28.963 to kind of template of activation that

NOTE Confidence: 0.866432583333333

01:03:28.963 --> 01:03:31.303 you can decode in the brain and that is

NOTE Confidence: 0.866432583333333

01:03:31.310 --> 01:03:33.896 much to a sensory incoming evidence.

NOTE Confidence: 0.866432583333333

01:03:33.900 --> 01:03:36.537 So in fact you have a kind of ghost

NOTE Confidence: 0.866432583333333

01:03:36.537 --> 01:03:38.319 activation that corresponds to what

NOTE Confidence: 0.866432583333333

01:03:38.319 --> 01:03:40.888 you're expecting and there is a matching

NOTE Confidence: 0.866432583333333

01:03:40.888 --> 01:03:43.274 and this really sharpened perception by

NOTE Confidence: 0.866432583333333

01:03:43.274 --> 01:03:46.220 increasing the the signal to noise ratio.

NOTE Confidence: 0.752423082363636

01:03:49.480 --> 01:03:53.064 And finally like of course connectivity is

NOTE Confidence: 0.752423082363636

01:03:53.064 --> 01:03:56.837 crucial so that cortical region of high

NOTE Confidence: 0.752423082363636

01:03:56.837 --> 01:04:00.190 level region can constraint and like sensory

NOTE Confidence: 0.752423082363636

01:04:00.274 --> 01:04:03.279 region according to this expectation.

NOTE Confidence: 0.752423082363636

01:04:03.280 --> 01:04:06.616 And it was shown in this study that

NOTE Confidence: 0.752423082363636

01:04:06.620 --> 01:04:09.161 like the top down effects rely on

NOTE Confidence: 0.752423082363636

01:04:09.161 --> 01:04:10.746 recurrent and enhanced connectivity

NOTE Confidence: 0.752423082363636

01:04:10.746 --> 01:04:12.886 within some different areas and

NOTE Confidence: 0.752423082363636

01:04:12.886 --> 01:04:15.444 more broadly like the long distance

NOTE Confidence: 0.752423082363636

01:04:15.444 --> 01:04:17.778 connectivity has been shown to be.

NOTE Confidence: 0.752423082363636

01:04:17.780 --> 01:04:19.514 Related to contraception,

NOTE Confidence: 0.752423082363636

01:04:19.514 --> 01:04:22.982 uh threshold and information sharing too.

NOTE Confidence: 0.752423082363636

01:04:22.990 --> 01:04:26.450 So what I would like to propose here is that.

NOTE Confidence: 0.752423082363636

01:04:26.450 --> 01:04:29.418 So if we take this hypothesis of global

NOTE Confidence: 0.752423082363636

01:04:29.418 --> 01:04:31.511 neuronal workspace with this top down

NOTE Confidence: 0.752423082363636

01:04:31.511 --> 01:04:34.358 that is very crucial to amplify and and

NOTE Confidence: 0.752423082363636

01:04:34.358 --> 01:04:36.508 let's information enter this workspace,

NOTE Confidence: 0.752423082363636

01:04:36.510 --> 01:04:38.658 the decrease of alpha band will

NOTE Confidence: 0.752423082363636

01:04:38.658 --> 01:04:40.592 impair this top down processing

NOTE Confidence: 0.752423082363636

01:04:40.592 --> 01:04:43.190 and you will have therefore less

NOTE Confidence: 0.752423082363636

01:04:43.190 --> 01:04:45.530 selectivity on your sensory input.

NOTE Confidence: 0.752423082363636

01:04:45.530 --> 01:04:48.127 So this is quite close to what

NOTE Confidence: 0.752423082363636

01:04:48.127 --> 01:04:50.729 is proposed by characterized and

NOTE Confidence: 0.752423082363636

01:04:50.730 --> 01:04:52.908 and also in the talamo particles.

NOTE Confidence: 0.752423082363636

01:04:52.910 --> 01:04:56.300 Well, a looper proposal proposal.

NOTE Confidence: 0.752423082363636

01:04:56.300 --> 01:04:59.450 So what are the consequences of that is that

NOTE Confidence: 0.752423082363636

01:04:59.450 --> 01:05:02.795 you will have less filtering of information.

NOTE Confidence: 0.752423082363636

01:05:02.800 --> 01:05:04.613 But also because there is this increase

NOTE Confidence: 0.752423082363636

01:05:04.613 --> 01:05:06.040 in their network connectivity,

NOTE Confidence: 0.752423082363636

01:05:06.040 --> 01:05:09.736 you will have an amplification of the,

NOTE Confidence: 0.752423082363636

01:05:09.740 --> 01:05:11.726 we can say the neural vector

NOTE Confidence: 0.752423082363636

01:05:11.726 --> 01:05:12.719 encoding conscious percept.

NOTE Confidence: 0.752423082363636

01:05:12.720 --> 01:05:15.100 So we can imagine that there will

NOTE Confidence: 0.752423082363636

01:05:15.100 --> 01:05:16.859 be more amplification inside the

NOTE Confidence: 0.752423082363636

01:05:16.859 --> 01:05:18.863 workspace because there is a lot

NOTE Confidence: 0.752423082363636

01:05:18.863 --> 01:05:20.837 of sharing of information and this

NOTE Confidence: 0.752423082363636

01:05:20.837 --> 01:05:23.092 will lead to this may lead to.

NOTE Confidence: 0.752423082363636

01:05:23.092 --> 01:05:25.052 Maybe there is less information

NOTE Confidence: 0.752423082363636

01:05:25.052 --> 01:05:26.228 inside the workspace,

NOTE Confidence: 0.752423082363636

01:05:26.230 --> 01:05:27.780 but this seems to be

NOTE Confidence: 0.752423082363636

01:05:27.780 --> 01:05:28.710 subjectively very amplified.

NOTE Confidence: 0.752423082363636

01:05:28.710 --> 01:05:31.126 And it was also interesting he showed that

NOTE Confidence: 0.752423082363636

01:05:31.126 --> 01:05:33.568 when you were missing some information,

NOTE Confidence: 0.752423082363636

01:05:33.570 --> 01:05:35.418 you never you never detect that

NOTE Confidence: 0.752423082363636

01:05:35.418 --> 01:05:36.650 you're missing some information,

NOTE Confidence: 0.752423082363636

01:05:36.650 --> 01:05:38.850 you just complete with information.

NOTE Confidence: 0.752423082363636

01:05:38.850 --> 01:05:40.338 And generally you have the illusion

NOTE Confidence: 0.752423082363636

01:05:40.338 --> 01:05:41.082 to perceive everything.

NOTE Confidence: 0.752423082363636

01:05:41.090 --> 01:05:42.546 So the less you perceive and the

NOTE Confidence: 0.752423082363636

01:05:42.546 --> 01:05:44.178 more you can have the impression

NOTE Confidence: 0.752423082363636

01:05:44.178 --> 01:05:45.450 that you perceive correctly,

NOTE Confidence: 0.752423082363636

01:05:45.450 --> 01:05:47.802 and in fact you are just missing the

NOTE Confidence: 0.752423082363636

01:05:47.802 --> 01:05:50.029 gap with your own representation.

NOTE Confidence: 0.752423082363636

01:05:50.030 --> 01:05:50.382 Also,

NOTE Confidence: 0.752423082363636

01:05:50.382 --> 01:05:52.846 this can be linked to the temporal

NOTE Confidence: 0.752423082363636

01:05:52.846 --> 01:05:54.990 dilatation that was regularly

NOTE Confidence: 0.752423082363636

01:05:54.990 --> 01:05:58.990 described under a psychedelic.

NOTE Confidence: 0.752423082363636

01:05:58.990 --> 01:06:01.770 Japan, activity of pyramidal neurons.

NOTE Confidence: 0.752423082363636

01:06:01.770 --> 01:06:03.723 So I said that they were like

NOTE Confidence: 0.752423082363636

01:06:03.723 --> 01:06:05.190 kind of coincidence detectors.

NOTE Confidence: 0.752423082363636

01:06:05.190 --> 01:06:07.526 So maybe the feeling of epiphany or the

NOTE Confidence: 0.752423082363636

01:06:07.526 --> 01:06:10.250 feeling of coincidence is linked to this

NOTE Confidence: 0.752423082363636

01:06:10.250 --> 01:06:12.325 hyperactivity of these pyramidal neurons.

NOTE Confidence: 0.752423082363636

01:06:12.330 --> 01:06:13.234 And um,

NOTE Confidence: 0.752423082363636

01:06:13.234 --> 01:06:15.946 because you have less um uh,

NOTE Confidence: 0.752423082363636

01:06:15.950 --> 01:06:17.620 uh, prediction and you have

NOTE Confidence: 0.752423082363636

01:06:17.620 --> 01:06:19.290 less low uh frequency reason,

NOTE Confidence: 0.752423082363636

01:06:19.290 --> 01:06:21.194 you are less able to give a unique

NOTE Confidence: 0.752423082363636

01:06:21.194 --> 01:06:22.589 interpretation of your sensory input.

NOTE Confidence: 0.752423082363636

01:06:22.590 --> 01:06:24.990 So there is something that is

NOTE Confidence: 0.752423082363636

01:06:24.990 --> 01:06:27.006 maybe that can be more moving

NOTE Confidence: 0.752423082363636

01:06:27.006 --> 01:06:29.195 and maybe unstable in the way

NOTE Confidence: 0.752423082363636

01:06:29.195 --> 01:06:31.125 you represent the external world.

NOTE Confidence: 0.752423082363636

01:06:31.130 --> 01:06:33.014 But because you have this activity

NOTE Confidence: 0.752423082363636

01:06:33.014 --> 01:06:34.270 of the pyramidal neuron,

NOTE Confidence: 0.752423082363636

01:06:34.270 --> 01:06:36.232 maybe you will just match some

NOTE Confidence: 0.752423082363636

01:06:36.232 --> 01:06:38.261 available templates that are here with

NOTE Confidence: 0.752423082363636

01:06:38.261 --> 01:06:39.921 perception because they are activated

NOTE Confidence: 0.752423082363636

01:06:39.921 --> 01:06:42.611 and they are all used to integrate

NOTE Confidence: 0.752423082363636

01:06:42.611 --> 01:06:44.243 external information with prediction.

NOTE Confidence: 0.752423082363636

01:06:44.250 --> 01:06:46.651 So this may explain why why you

NOTE Confidence: 0.752423082363636

01:06:46.651 --> 01:06:48.948 match your sensory input with for

NOTE Confidence: 0.752423082363636

01:06:48.948 --> 01:06:50.938 example geometrical forms of faces

NOTE Confidence: 0.752423082363636

01:06:50.938 --> 01:06:53.456 are very like common patterns of

NOTE Confidence: 0.752423082363636

01:06:53.456 --> 01:06:55.516 activation that may be available

NOTE Confidence: 0.752423082363636

01:06:55.516 --> 01:06:58.444 and and and will be just hyper

NOTE Confidence: 0.752423082363636

01:06:58.444 --> 01:07:00.770 matched with this sensory inputs.

NOTE Confidence: 0.752423082363636

01:07:00.770 --> 01:07:01.558 And finally,

NOTE Confidence: 0.752423082363636

01:07:01.558 --> 01:07:04.316 but this is a more general statement,

NOTE Confidence: 0.832602894117647

01:07:04.320 --> 01:07:06.938 the increase of the uncertainty and the

NOTE Confidence: 0.832602894117647

01:07:06.938 --> 01:07:08.954 change in perception they have shown

NOTE Confidence: 0.832602894117647

01:07:08.954 --> 01:07:12.330 to be linked to like to to favor jumps

NOTE Confidence: 0.832602894117647

01:07:12.330 --> 01:07:14.600 to conclusion and delusional ideas.

NOTE Confidence: 0.832602894117647

01:07:14.600 --> 01:07:17.918 And there may be also, of course involved

NOTE Confidence: 0.832602894117647

01:07:17.918 --> 01:07:20.954 in the mental flexibility that have

NOTE Confidence: 0.832602894117647

01:07:20.954 --> 01:07:23.680 potential therapeutical effects. Yes.

NOTE Confidence: 0.805655854285714

01:07:26.920 --> 01:07:28.495 So that's the part that talks about.

NOTE Confidence: 0.805655854285714

01:07:28.500 --> 01:07:31.128 So less ability to give unique

NOTE Confidence: 0.805655854285714

01:07:31.128 --> 01:07:32.880 interpretation of sensory input.

NOTE Confidence: 0.805655854285714

01:07:32.880 --> 01:07:35.616 And I wonder if it is related with

NOTE Confidence: 0.805655854285714

01:07:35.616 --> 01:07:38.967 the sort of we have to decrease

NOTE Confidence: 0.805655854285714

01:07:38.967 --> 01:07:40.518 connectivity within networks.

NOTE Confidence: 0.805655854285714

01:07:40.520 --> 01:07:43.404 And I wonder if that also applies

NOTE Confidence: 0.805655854285714

01:07:43.404 --> 01:07:45.518 in terms of those interpretations

NOTE Confidence: 0.805655854285714

01:07:45.518 --> 01:07:48.152 that are so ingrained in different

NOTE Confidence: 0.805655854285714

01:07:48.152 --> 01:07:50.472 conditions or those associations that

NOTE Confidence: 0.805655854285714

01:07:50.472 --> 01:07:52.762 are ingrained in different conditions

NOTE Confidence: 0.805655854285714

01:07:52.762 --> 01:07:55.437 like making an association between one.

NOTE Confidence: 0.805655854285714

01:07:55.440 --> 01:07:57.688 Do you like and I'll draw on something

NOTE Confidence: 0.805655854285714

01:07:57.688 --> 01:07:59.818 in the environment and like having

NOTE Confidence: 0.805655854285714

01:07:59.818 --> 01:08:02.353 an obsessive thought or I wonder if

NOTE Confidence: 0.805655854285714

01:08:02.353 --> 01:08:05.360 part of the what we see with imagine

NOTE Confidence: 0.805655854285714

01:08:05.360 --> 01:08:07.710 like with less network connectivity,

NOTE Confidence: 0.805655854285714

01:08:07.710 --> 01:08:10.525 also more complexities is related

NOTE Confidence: 0.805655854285714

01:08:10.525 --> 01:08:12.777 with having that wider?

NOTE Confidence: 0.805655854285714

01:08:12.780 --> 01:08:16.215 Repertory in terms of associations

NOTE Confidence: 0.805655854285714

01:08:16.215 --> 01:08:17.589 or interpretation.

NOTE Confidence: 0.805655854285714

01:08:17.590 --> 01:08:18.960 Yeah, yeah,

NOTE Confidence: 0.813763891428571

01:08:19.050 --> 01:08:22.004 yeah. Yeah. So you write that this

NOTE Confidence: 0.813763891428571

01:08:22.010 --> 01:08:23.805 diffuse ability to to interpret

NOTE Confidence: 0.813763891428571

01:08:23.805 --> 01:08:25.968 uniquely and sensory input and we

NOTE Confidence: 0.813763891428571

01:08:25.968 --> 01:08:27.810 also due to like the disintegration

NOTE Confidence: 0.813763891428571

01:08:27.810 --> 01:08:30.155 of the network or the the increased

NOTE Confidence: 0.813763891428571

01:08:30.155 --> 01:08:32.201 connectivity of Internet work that can

NOTE Confidence: 0.813763891428571

01:08:32.210 --> 01:08:34.988 interfere with basically with the like

NOTE Confidence: 0.813763891428571

01:08:34.988 --> 01:08:37.265 like their regular functioning and

NOTE Confidence: 0.813763891428571

01:08:37.265 --> 01:08:39.708 and and their role to to distinguish

NOTE Confidence: 0.813763891428571

01:08:39.708 --> 01:08:41.689 between one thing and another.

NOTE Confidence: 0.813763891428571

01:08:41.690 --> 01:08:43.714 But what I like is in this idea

NOTE Confidence: 0.813763891428571

01:08:43.714 --> 01:08:45.908 and it's and and I didn't say

NOTE Confidence: 0.813763891428571

01:08:45.908 --> 01:08:47.523 but it's of course absolutely.

NOTE Confidence: 0.813763891428571

01:08:47.530 --> 01:08:49.230 Uh, compatible with the telemetry?

NOTE Confidence: 0.813763891428571

01:08:49.230 --> 01:08:52.800 Uh, hypothesis because the telemetry,

NOTE Confidence: 0.813763891428571

01:08:52.800 --> 01:08:54.310 the telemus also filtering information

NOTE Confidence: 0.813763891428571

01:08:54.310 --> 01:08:56.756 and allowed to to to choose between

NOTE Confidence: 0.813763891428571

01:08:56.756 --> 01:08:58.076 several interpretations too.

NOTE Confidence: 0.813763891428571

01:08:58.080 --> 01:09:00.612 So I think it's just another

NOTE Confidence: 0.813763891428571

01:09:00.612 --> 01:09:01.878 level of description.

NOTE Confidence: 0.813763891428571

01:09:01.880 --> 01:09:02.500 But yeah,

NOTE Confidence: 0.813763891428571

01:09:02.500 --> 01:09:04.360 because it's what I know it's,

NOTE Confidence: 0.813763891428571

01:09:04.360 --> 01:09:05.896 I feel more comfortable with this

NOTE Confidence: 0.813763891428571

01:09:05.896 --> 01:09:06.920 way of describing things.

NOTE Confidence: 0.813763891428571

01:09:06.920 --> 01:09:08.992 But of course it's it's not anemic

NOTE Confidence: 0.813763891428571

01:09:08.992 --> 01:09:10.949 with the the other proposals.

NOTE Confidence: 0.7818619375

01:09:13.600 --> 01:09:15.756 I'm almost done I think I have

NOTE Confidence: 0.7818619375

01:09:15.756 --> 01:09:17.660 two slides so please slide.

NOTE Confidence: 0.7818619375

01:09:17.660 --> 01:09:21.832 So the limitation all of these studies

NOTE Confidence: 0.7818619375

01:09:21.832 --> 01:09:26.479 so I took this summary that only

NOTE Confidence: 0.7818619375

01:09:26.480 --> 01:09:28.154 talk about resting state of moral

NOTE Confidence: 0.7818619375

01:09:28.154 --> 01:09:29.854 literature but I think it's it's

NOTE Confidence: 0.7818619375

01:09:29.854 --> 01:09:31.438 quite obvious what are the problem

NOTE Confidence: 0.7818619375

01:09:31.438 --> 01:09:33.120 with all this second indicator.

NOTE Confidence: 0.7818619375

01:09:33.120 --> 01:09:36.306 So first of all what you can see is

NOTE Confidence: 0.7818619375

01:09:36.306 --> 01:09:39.061 that there is many many reanalysis

NOTE Confidence: 0.7818619375

01:09:39.061 --> 01:09:41.810 of few cohorts of data and.

NOTE Confidence: 0.7818619375

01:09:41.810 --> 01:09:42.692 This is striking,

NOTE Confidence: 0.7818619375

01:09:42.692 --> 01:09:44.456 like it's almost like half of

NOTE Confidence: 0.7818619375

01:09:44.456 --> 01:09:46.319 the articles are in fact coming

NOTE Confidence: 0.7818619375

01:09:46.319 --> 01:09:47.523 from the same data.

NOTE Confidence: 0.7818619375

01:09:47.530 --> 01:09:50.182 So this is of course a

NOTE Confidence: 0.7818619375

01:09:50.182 --> 01:09:51.508 problem for reproducibility.

NOTE Confidence: 0.7818619375

01:09:51.510 --> 01:09:53.470 And I I, I mean,

NOTE Confidence: 0.7818619375

01:09:53.470 --> 01:09:55.374 I also totally admit that it's very

NOTE Confidence: 0.7818619375

01:09:55.374 --> 01:09:56.979 difficult to build such studies and

NOTE Confidence: 0.7818619375

01:09:56.979 --> 01:09:58.701 I I know what I'm talking about.

NOTE Confidence: 0.7818619375

01:09:58.710 --> 01:10:01.942 But of course this is a problem for

NOTE Confidence: 0.7818619375

01:10:01.942 --> 01:10:03.950 interpretation and generalization.

NOTE Confidence: 0.7818619375

01:10:03.950 --> 01:10:04.214 Second,

NOTE Confidence: 0.7818619375

01:10:04.214 --> 01:10:06.062 so there are not so many participants

NOTE Confidence: 0.7818619375

01:10:06.062 --> 01:10:08.000 in the study and we would like

NOTE Confidence: 0.7818619375

01:10:08.000 --> 01:10:09.350 to have more important study,

NOTE Confidence: 0.7818619375

01:10:09.350 --> 01:10:11.228 even if in cognitive psychology generally,

NOTE Confidence: 0.7818619375

01:10:11.230 --> 01:10:11.760 like with.

NOTE Confidence: 0.7818619375

01:10:11.760 --> 01:10:13.615 25 people you are you already have

NOTE Confidence: 0.7818619375

01:10:13.615 --> 01:10:15.922 like substantial results, of course.

NOTE Confidence: 0.7818619375

01:10:15.922 --> 01:10:19.149 So here are only resting state literature,

NOTE Confidence: 0.7818619375

01:10:19.150 --> 01:10:20.894 but in fact it's like most of the

NOTE Confidence: 0.7818619375

01:10:20.894 --> 01:10:22.364 literature in your imaging literature

NOTE Confidence: 0.7818619375

01:10:22.364 --> 01:10:24.320 and psychedelic is using resting state.

NOTE Confidence: 0.7818619375

01:10:24.320 --> 01:10:27.433 And this is a like kind of an

NOTE Confidence: 0.7818619375

01:10:27.433 --> 01:10:29.050 issue because in fact we don't know

NOTE Confidence: 0.7818619375

01:10:29.101 --> 01:10:30.817 exactly what people are doing during

NOTE Confidence: 0.7818619375

01:10:30.817 --> 01:10:32.416 resting state and in particular

NOTE Confidence: 0.7818619375

01:10:32.416 --> 01:10:33.886 during secret experience there

NOTE Confidence: 0.7818619375

01:10:33.886 --> 01:10:35.551 may be totally attractive and

NOTE Confidence: 0.7818619375

01:10:35.551 --> 01:10:37.100 fascinated by something and just

NOTE Confidence: 0.7818619375

01:10:37.100 --> 01:10:38.600 processing one thing for a while.

NOTE Confidence: 0.7818619375

01:10:38.600 --> 01:10:41.246 And we don't know if what we are analyzing

NOTE Confidence: 0.7818619375

01:10:41.246 --> 01:10:43.866 is like really demanding resting or

NOTE Confidence: 0.7818619375

01:10:43.866 --> 01:10:46.520 just focalizing on something special that.

NOTE Confidence: 0.7818619375

01:10:46.520 --> 01:10:48.530 And the difference across participants.

NOTE Confidence: 0.7818619375

01:10:48.530 --> 01:10:52.067 So I think that we really need to have

NOTE Confidence: 0.7818619375

01:10:52.067 --> 01:10:54.510 more tasks because it's more constraining.

NOTE Confidence: 0.7818619375

01:10:54.510 --> 01:10:57.497 So of course it also have its limits

NOTE Confidence: 0.7818619375

01:10:57.497 --> 01:10:59.842 and but it it helps to compare

NOTE Confidence: 0.7818619375

01:10:59.842 --> 01:11:01.941 different condition maybe in a

NOTE Confidence: 0.7818619375

01:11:01.941 --> 01:11:03.210 more constrained manner.

NOTE Confidence: 0.7818619375

01:11:03.210 --> 01:11:04.114 So as I said,

NOTE Confidence: 0.7818619375

01:11:04.114 --> 01:11:06.209 so I did not mention there is just one.

NOTE Confidence: 0.632653468

01:11:08.750 --> 01:11:10.870 Study with muslin, but uh,

NOTE Confidence: 0.632653468

01:11:10.870 --> 01:11:14.188 so many of the study involved the

NOTE Confidence: 0.632653468

01:11:14.188 --> 01:11:17.750 SILYBIN and LSD a bit less for iasca.

NOTE Confidence: 0.632653468

01:11:17.750 --> 01:11:19.166 And what would be,

NOTE Confidence: 0.632653468

01:11:19.166 --> 01:11:21.290 I think really interesting is to

NOTE Confidence: 0.632653468

01:11:21.359 --> 01:11:24.030 compare the drug one to another and

NOTE Confidence: 0.632653468

01:11:24.030 --> 01:11:25.980 in particular with getting into

NOTE Confidence: 0.632653468

01:11:25.980 --> 01:11:27.910 because I did not highlight it.

NOTE Confidence: 0.632653468

01:11:27.910 --> 01:11:30.906 So yeah, yeah, someone should do that.

NOTE Confidence: 0.632653468

01:11:30.910 --> 01:11:33.466 So because as you can see,

NOTE Confidence: 0.632653468

01:11:33.470 --> 01:11:34.634 there are several aspects

NOTE Confidence: 0.632653468

01:11:34.634 --> 01:11:36.089 that are a bit different,

NOTE Confidence: 0.632653468

01:11:36.090 --> 01:11:38.045 in particular for the feed

NOTE Confidence: 0.632653468

01:11:38.045 --> 01:11:40.000 forward we talked about already.

NOTE Confidence: 0.632653468

01:11:40.000 --> 01:11:41.986 But also the condition are generally

NOTE Confidence: 0.632653468

01:11:41.986 --> 01:11:44.141 different and even in the use of

NOTE Confidence: 0.632653468

01:11:44.141 --> 01:11:45.426 people like I generally taken

NOTE Confidence: 0.632653468

01:11:45.426 --> 01:11:47.368 in a ritual way and things like

NOTE Confidence: 0.632653468

01:11:47.368 --> 01:11:49.492 that and we we really want to

NOTE Confidence: 0.632653468

01:11:49.492 --> 01:11:52.124 compare and to see what are the

NOTE Confidence: 0.632653468

01:11:52.124 --> 01:11:53.955 pharmacological difference and the

NOTE Confidence: 0.632653468

01:11:53.955 --> 01:11:55.895 the neuroimaging differences between

NOTE Confidence: 0.632653468

01:11:55.900 --> 01:11:57.850 several drugs in the very same.

NOTE Confidence: 0.4623852375

01:11:59.940 --> 01:12:03.420 But I'm experimental paradigm.

NOTE Confidence: 0.4623852375

01:12:03.420 --> 01:12:05.972 So we would also be very interested in

NOTE Confidence: 0.4623852375

01:12:05.972 --> 01:12:07.436 comparing these different population

NOTE Confidence: 0.4623852375

01:12:07.436 --> 01:12:10.089 because in general the study were either

NOTE Confidence: 0.4623852375

01:12:10.089 --> 01:12:12.779 in control or in patient with depression.

NOTE Confidence: 0.4623852375

01:12:12.780 --> 01:12:15.090 But there is not really comparison between

NOTE Confidence: 0.4623852375

01:12:15.090 --> 01:12:17.977 the two for neuroimaging studies at least.

NOTE Confidence: 0.4623852375

01:12:17.980 --> 01:12:19.696 Um, we talked about it also,

NOTE Confidence: 0.4623852375

01:12:19.700 --> 01:12:21.954 but uh it would be quite interesting

NOTE Confidence: 0.4623852375

01:12:21.954 --> 01:12:24.815 to see uh the long lasting effects or

NOTE Confidence: 0.4623852375

01:12:24.815 --> 01:12:27.214 at least just some study explored the

NOTE Confidence: 0.4623852375

01:12:27.214 --> 01:12:28.936 time dependent effect in the session.

NOTE Confidence: 0.4623852375

01:12:28.940 --> 01:12:30.550 So they did several scan in the

NOTE Confidence: 0.4623852375

01:12:30.550 --> 01:12:31.990 in the very same session.

NOTE Confidence: 0.4623852375

01:12:31.990 --> 01:12:34.356 But it could be also interesting to

NOTE Confidence: 0.4623852375

01:12:34.356 --> 01:12:36.890 see what is left after a session

NOTE Confidence: 0.4623852375

01:12:36.890 --> 01:12:38.565 of psychedelic and also maybe

NOTE Confidence: 0.4623852375

01:12:38.565 --> 01:12:40.140 to explore the different doses.

NOTE Confidence: 0.4623852375

01:12:40.140 --> 01:12:42.289 So there are several study with Microdose,

NOTE Confidence: 0.4623852375

01:12:42.290 --> 01:12:43.844 but it could be interesting within

NOTE Confidence: 0.4623852375

01:12:43.844 --> 01:12:46.211 us the same study and within the same

NOTE Confidence: 0.4623852375

01:12:46.211 --> 01:12:48.125 experimental guidance to have several doses.

NOTE Confidence: 0.4623852375

01:12:48.130 --> 01:12:49.770 So to compare and to see what is

NOTE Confidence: 0.4623852375

01:12:49.770 --> 01:12:50.539 dose dependent or not.

NOTE Confidence: 0.766819628333333

01:12:53.020 --> 01:12:55.568 OK, so as I should like psychedelic

NOTE Confidence: 0.766819628333333

01:12:55.568 --> 01:12:58.045 drastically change a brain state of

NOTE Confidence: 0.766819628333333

01:12:58.045 --> 01:13:00.240 activity and connectivity during rests,

NOTE Confidence: 0.766819628333333

01:13:00.240 --> 01:13:01.890 decreased within connectivity,

NOTE Confidence: 0.766819628333333

01:13:01.890 --> 01:13:03.540 increase entropy and

NOTE Confidence: 0.766819628333333

01:13:03.540 --> 01:13:04.640 internetwork connectivity,

NOTE Confidence: 0.766819628333333

01:13:04.640 --> 01:13:08.370 in particular in sensory areas.

NOTE Confidence: 0.766819628333333

01:13:08.370 --> 01:13:11.514 This decrease of low frequency problems

NOTE Confidence: 0.766819628333333

01:13:11.514 --> 01:13:14.650 that are probably involved in feedback.

NOTE Confidence: 0.766819628333333

01:13:14.650 --> 01:13:17.090 Some effects are quite consistently

NOTE Confidence: 0.766819628333333

01:13:17.090 --> 01:13:19.042 associated with subjective effects,

NOTE Confidence: 0.766819628333333

01:13:19.050 --> 01:13:21.269 and in particular the effect of Magdala,

NOTE Confidence: 0.766819628333333

01:13:21.270 --> 01:13:25.462 which showed that it were quite linked to the

NOTE Confidence: 0.766819628333333

01:13:25.462 --> 01:13:29.150 increased positive effects under psychedelic.

NOTE Confidence: 0.766819628333333

01:13:29.150 --> 01:13:31.148 But some of the branches are

NOTE Confidence: 0.766819628333333

01:13:31.148 --> 01:13:33.029 changes are more difficult to link,

NOTE Confidence: 0.766819628333333

01:13:33.030 --> 01:13:35.520 or are maybe inconsistent across

NOTE Confidence: 0.766819628333333

01:13:35.520 --> 01:13:37.512 studies or across psychedelics,

NOTE Confidence: 0.766819628333333

01:13:37.520 --> 01:13:41.174 so it's difficult to really know what

NOTE Confidence: 0.766819628333333

01:13:41.174 --> 01:13:45.049 what are their subjective correlates.

NOTE Confidence: 0.766819628333333

01:13:45.050 --> 01:13:46.595 And finally the the current

NOTE Confidence: 0.766819628333333

01:13:46.595 --> 01:13:48.140 theoretical models agree on a

NOTE Confidence: 0.766819628333333

01:13:48.197 --> 01:13:50.147 decrease of filtering prior control.

NOTE Confidence: 0.766819628333333

01:13:50.150 --> 01:13:51.470 So there are different terms,

NOTE Confidence: 0.766819628333333

01:13:51.470 --> 01:13:54.494 but basically the idea is that there is

NOTE Confidence: 0.766819628333333

01:13:54.494 --> 01:13:56.460 less constraint on sensory processing

NOTE Confidence: 0.766819628333333

01:13:56.460 --> 01:13:59.561 and they kind of disagree on what is

NOTE Confidence: 0.766819628333333

01:13:59.561 --> 01:14:01.829 the main mechanism or stable region

NOTE Confidence: 0.766819628333333

01:14:01.829 --> 01:14:06.590 that is involved in in this effect.

NOTE Confidence: 0.766819628333333

01:14:06.590 --> 01:14:08.186 So the future direction,

NOTE Confidence: 0.766819628333333

01:14:08.186 --> 01:14:12.344 so for me like on top of all the proposal

NOTE Confidence: 0.766819628333333

01:14:12.344 --> 01:14:16.124 I made for having more maybe reliable or

NOTE Confidence: 0.766819628333333

01:14:16.124 --> 01:14:18.993 generalizable data for second imaging.

NOTE Confidence: 0.766819628333333

01:14:18.993 --> 01:14:21.951 I think that the two direction

NOTE Confidence: 0.766819628333333

01:14:21.951 --> 01:14:25.138 that we have is on the first

NOTE Confidence: 0.766819628333333

01:14:25.138 --> 01:14:27.095 hand like a better description,

NOTE Confidence: 0.766819628333333

01:14:27.095 --> 01:14:28.820 better description of the subjective

NOTE Confidence: 0.766819628333333

01:14:28.820 --> 01:14:31.509 effects and maybe one also of the aspect is

NOTE Confidence: 0.766819628333333

01:14:31.509 --> 01:14:33.310 that there is inter individual variation.

NOTE Confidence: 0.766819628333333

01:14:33.310 --> 01:14:36.254 So it will be very interesting and it's.

NOTE Confidence: 0.766819628333333

01:14:36.260 --> 01:14:38.330 It's in fact something that's our

NOTE Confidence: 0.766819628333333

01:14:38.330 --> 01:14:41.039 lab do to map the subjective effects

NOTE Confidence: 0.766819628333333

01:14:41.039 --> 01:14:43.965 to a neural individual map and not

NOTE Confidence: 0.766819628333333

01:14:44.043 --> 01:14:46.535 only to put everybody in the same.

NOTE Confidence: 0.87041944

01:14:49.150 --> 01:14:53.010 In the same group and it's important

NOTE Confidence: 0.87041944

01:14:53.010 --> 01:14:56.930 because if we if we are working on

NOTE Confidence: 0.87041944

01:14:56.930 --> 01:14:58.754 this individual neural effects,

NOTE Confidence: 0.87041944

01:14:58.754 --> 01:15:02.070 we will probably have more power to link

NOTE Confidence: 0.87041944

01:15:02.070 --> 01:15:04.422 the the subjective and the neural and

NOTE Confidence: 0.87041944

01:15:04.422 --> 01:15:07.405 the maybe the receptor also and better

NOTE Confidence: 0.87041944

01:15:07.405 --> 01:15:09.785 better understanding of the mechanistic.

NOTE Confidence: 0.87041944

01:15:09.790 --> 01:15:11.054 On the other hand,

NOTE Confidence: 0.87041944

01:15:11.054 --> 01:15:13.402 it will also be helpful to see

NOTE Confidence: 0.87041944

01:15:13.402 --> 01:15:15.297 what of these subjective effect

NOTE Confidence: 0.87041944

01:15:15.297 --> 01:15:17.520 may be helpful for patients.

NOTE Confidence: 0.87041944

01:15:17.520 --> 01:15:20.130 And once they see your addiction?

NOTE Confidence: 0.87041944

01:15:20.130 --> 01:15:25.357 And the second as aspect is in

NOTE Confidence: 0.87041944

01:15:25.357 --> 01:15:28.626 fact the using the psychedelic as a

NOTE Confidence: 0.87041944

01:15:28.626 --> 01:15:30.660 pharmacological model of psychosis.

NOTE Confidence: 0.87041944

01:15:30.660 --> 01:15:32.868 So in this case what we would like

NOTE Confidence: 0.87041944

01:15:32.868 --> 01:15:35.904 to do is rather to see what is the

NOTE Confidence: 0.87041944

01:15:35.904 --> 01:15:37.630 neural dysfunction in patients.

NOTE Confidence: 0.87041944

01:15:37.630 --> 01:15:39.622 So without taking them you can

NOTE Confidence: 0.87041944

01:15:39.622 --> 01:15:41.648 just doing brain imaging when they

NOTE Confidence: 0.87041944

01:15:41.648 --> 01:15:43.243 have like specific symptoms and

NOTE Confidence: 0.87041944

01:15:43.243 --> 01:15:45.693 try to link these symptoms to what

NOTE Confidence: 0.87041944

01:15:45.693 --> 01:15:47.473 we can observe under psychedelic

NOTE Confidence: 0.87041944

01:15:47.473 --> 01:15:50.050 and again if possible in the.

NOTE Confidence: 0.87041944

01:15:50.050 --> 01:15:51.904 Individual manner because in this case

NOTE Confidence: 0.87041944

01:15:51.904 --> 01:15:54.171 we may think for example that when

NOTE Confidence: 0.87041944

01:15:54.171 --> 01:15:56.121 patient is as a cerebral exhibition

NOTE Confidence: 0.87041944

01:15:56.121 --> 01:15:58.191 that is close to LSU response map

NOTE Confidence: 0.87041944

01:15:58.191 --> 01:16:00.292 and therefore that is mechanism is

NOTE Confidence: 0.87041944

01:16:00.292 --> 01:16:04.360 more a certain energetic logic.

NOTE Confidence: 0.87041944

01:16:04.360 --> 01:16:04.713 Yeah.

NOTE Confidence: 0.87041944

01:16:04.713 --> 01:16:05.066 Dysfunction,

NOTE Confidence: 0.87041944

01:16:05.066 --> 01:16:07.184 whereas another one may have for

NOTE Confidence: 0.87041944

01:16:07.184 --> 01:16:09.460 example a neural response map that is

NOTE Confidence: 0.87041944

01:16:09.460 --> 01:16:11.757 closer to look at anyone would have

NOTE Confidence: 0.87041944

01:16:11.757 --> 01:16:13.582 maybe more dissociative effects and

NOTE Confidence: 0.87041944

01:16:13.582 --> 01:16:16.114 things like that and the mechanistic

NOTE Confidence: 0.87041944

01:16:16.114 --> 01:16:18.982 of possible therapeutic drug may be

NOTE Confidence: 0.87041944

01:16:18.982 --> 01:16:21.628 different and this will really open

NOTE Confidence: 0.87041944

01:16:21.628 --> 01:16:24.460 the the field of individualized medicine.

NOTE Confidence: 0.87041944

01:16:24.460 --> 01:16:25.494 I finished.

NOTE Confidence: 0.87041944

01:16:25.494 --> 01:16:28.596 So thank you for your attention

NOTE Confidence: 0.87041944

01:16:28.600 --> 01:16:30.900 and of course I yeah,

NOTE Confidence: 0.87041944

01:16:30.900 --> 01:16:31.938 I see that there were so

NOTE Confidence: 0.87041944

01:16:31.938 --> 01:16:32.860 many questions in the chat.

NOTE Confidence: 0.87041944

01:16:32.860 --> 01:16:35.254 Sorry I could not do at the same time,

NOTE Confidence: 0.87041944

01:16:35.260 --> 01:16:37.555 but of course I would be happy to have

NOTE Confidence: 0.87041944

01:16:37.555 --> 01:16:40.129 your feedback and to answer your questions.

NOTE Confidence: 0.74743540875

01:16:41.040 --> 01:16:41.991 Thank you, Lucy.

NOTE Confidence: 0.74743540875

01:16:41.991 --> 01:16:43.576 That was a wonderful day.

NOTE Confidence: 0.74743540875

01:16:43.580 --> 01:16:47.374 Thank you. We do have a couple of

NOTE Confidence: 0.74743540875

01:16:47.374 --> 01:16:48.970 questions dangling in the chat.

NOTE Confidence: 0.74743540875

01:16:48.970 --> 01:16:49.996 One thing for me to do,

NOTE Confidence: 0.74743540875

01:16:50.000 --> 01:16:53.210 the collective findings, this is a big.

NOTE Confidence: 0.74743540875

01:16:53.210 --> 01:16:57.530 Reconcile the phenomenon of a bad trip.

NOTE Confidence: 0.74743540875

01:16:57.530 --> 01:16:58.530 And because, you know,

NOTE Confidence: 0.74743540875

01:16:58.530 --> 01:17:00.030 to the extent that they did,

NOTE Confidence: 0.74743540875

01:17:00.030 --> 01:17:02.004 the group data all looked pretty positive.

NOTE Confidence: 0.74743540875

01:17:02.010 --> 01:17:03.282 So how do we understand the

NOTE Confidence: 0.74743540875

01:17:03.282 --> 01:17:04.410 phenomenon of a bad trip?

NOTE Confidence: 0.74743540875

01:17:04.410 --> 01:17:05.110 And relatedly,

NOTE Confidence: 0.74743540875

01:17:05.110 --> 01:17:07.210 do we understand how or why

NOTE Confidence: 0.74743540875

01:17:07.210 --> 01:17:08.417 some depressed individuals

NOTE Confidence: 0.74743540875

01:17:08.417 --> 01:17:10.602 may be non responders despite

NOTE Confidence: 0.74743540875

01:17:10.602 --> 01:17:12.350 having the second experience?

NOTE Confidence: 0.74743540875

01:17:12.350 --> 01:17:13.616 It's not quite the same question,

NOTE Confidence: 0.74743540875

01:17:13.620 --> 01:17:15.419 but both around how this negative affect.

NOTE Confidence: 0.80539116125

01:17:16.170 --> 01:17:20.778 Yes, so. So there is one study exploring.

NOTE Confidence: 0.80539116125

01:17:20.780 --> 01:17:23.034 So the difference between, but in fact

NOTE Confidence: 0.80539116125

01:17:23.034 --> 01:17:25.376 it's not really the goal of the study,

NOTE Confidence: 0.80539116125

01:17:25.380 --> 01:17:27.669 but they were exploring the level of

NOTE Confidence: 0.80539116125

01:17:27.669 --> 01:17:30.094 glutamate in the brain and they find

NOTE Confidence: 0.80539116125

01:17:30.094 --> 01:17:32.164 that the increasing glutamate in the

NOTE Confidence: 0.80539116125

01:17:32.233 --> 01:17:34.543 prefrontal cortex was associated with bad

NOTE Confidence: 0.80539116125

01:17:34.543 --> 01:17:37.020 trip and in the hippocampus was associated

NOTE Confidence: 0.80539116125

01:17:37.020 --> 01:17:39.798 with good trip if my memory are good.

NOTE Confidence: 0.80539116125

01:17:39.800 --> 01:17:43.054 So in fact there was a regional good trip or

NOTE Confidence: 0.80539116125

01:17:43.054 --> 01:17:46.100 bad trip levels of mutants in this study,

NOTE Confidence: 0.80539116125

01:17:46.100 --> 01:17:47.015 but otherwise it's.

NOTE Confidence: 0.80539116125

01:17:47.015 --> 01:17:49.560 Yeah, I think there is a general bias

NOTE Confidence: 0.80539116125

01:17:49.560 --> 01:17:51.636 from a researcher in psychedelic towards

NOTE Confidence: 0.80539116125

01:17:51.636 --> 01:17:54.150 the good trip and a very good setting.

NOTE Confidence: 0.80539116125

01:17:54.150 --> 01:17:58.099 So many people in fact in this in this study.

NOTE Confidence: 0.80539116125

01:17:58.099 --> 01:18:00.500 Did not experience such a bad trip

NOTE Confidence: 0.80539116125

01:18:00.570 --> 01:18:02.964 and so we don't have, I think,

NOTE Confidence: 0.80539116125

01:18:02.964 --> 01:18:05.736 enough cases to really have the

NOTE Confidence: 0.80539116125

01:18:05.736 --> 01:18:07.699 neural correlates of battrick.

NOTE Confidence: 0.80539116125

01:18:07.700 --> 01:18:09.485 But this is a very interesting question,

NOTE Confidence: 0.8705727275

01:18:09.500 --> 01:18:14.270 of course, because we. She started.

NOTE Confidence: 0.8705727275

01:18:14.270 --> 01:18:17.196 Yeah, yeah. I'm sure you would

NOTE Confidence: 0.8705727275

01:18:17.196 --> 01:18:19.070 have improvement for that, but

NOTE Confidence: 0.877755048333333

01:18:19.400 --> 01:18:22.510 can be interesting and at least, yeah.

NOTE Confidence: 0.567197738

01:18:24.190 --> 01:18:29.120 Risk benefit ratio. You know, like.

NOTE Confidence: 0.6829256

01:18:29.120 --> 01:18:31.600 To protect patients from that, we have

NOTE Confidence: 0.85788374

01:18:31.610 --> 01:18:33.790 to know what it is.

NOTE Confidence: 0.85788374

01:18:33.790 --> 01:18:35.428 Worked for a couple of days,

NOTE Confidence: 0.765065336666667

01:18:35.440 --> 01:18:37.945 but I think like anyways we do,

NOTE Confidence: 0.765065336666667

01:18:37.945 --> 01:18:39.650 if there's more and more study,

NOTE Confidence: 0.78439685

01:18:39.660 --> 01:18:42.345 we will have more. Yeah. I mean,

NOTE Confidence: 0.78439685

01:18:42.345 --> 01:18:43.737 yeah, it could turn into, yeah,

NOTE Confidence: 0.78439685

01:18:43.737 --> 01:18:45.339 if you start, you can evaluate

NOTE Confidence: 0.717251925714286

01:18:45.350 --> 01:18:49.207 exactly. And the second one was why?

NOTE Confidence: 0.717251925714286

01:18:49.210 --> 01:18:51.140 Depression do not respond.

NOTE Confidence: 0.717251925714286

01:18:51.140 --> 01:18:53.390 So yeah, I mean this is even a broader

NOTE Confidence: 0.717251925714286

01:18:53.390 --> 01:18:55.074 question like for for psychiatrists like

NOTE Confidence: 0.717251925714286

01:18:55.074 --> 01:18:57.682 why in some case you give a medicine it

NOTE Confidence: 0.717251925714286

01:18:57.682 --> 01:18:59.434 works and sometimes it doesn't work.

NOTE Confidence: 0.717251925714286

01:18:59.440 --> 01:19:01.846 So it's a very difficult question.

NOTE Confidence: 0.717251925714286

01:19:01.850 --> 01:19:03.685 Probably there is heterogeneity in

NOTE Confidence: 0.717251925714286

01:19:03.685 --> 01:19:05.800 patients with depression first of all.

NOTE Confidence: 0.717251925714286

01:19:05.800 --> 01:19:08.068 So of course they may not have the the

NOTE Confidence: 0.717251925714286

01:19:08.068 --> 01:19:10.145 same neural mechanisms of depression and

NOTE Confidence: 0.717251925714286

01:19:10.145 --> 01:19:13.803 and thereby not the same like a response

NOTE Confidence: 0.717251925714286

01:19:13.803 --> 01:19:17.893 to to treatment after like I can say

NOTE Confidence: 0.717251925714286

01:19:17.893 --> 01:19:19.759 from my experience with ketamine because.

NOTE Confidence: 0.717251925714286

01:19:19.760 --> 01:19:22.528 We were using a lot of ketamine to

NOTE Confidence: 0.717251925714286

01:19:22.528 --> 01:19:24.948 help people with a resistant depression

NOTE Confidence: 0.717251925714286

01:19:24.948 --> 01:19:27.870 and I don't know you manage afterward

NOTE Confidence: 0.717251925714286

01:19:27.870 --> 01:19:30.758 to to know a bit which patient will

NOTE Confidence: 0.717251925714286

01:19:30.758 --> 01:19:32.541 be will have a good trip or bad

NOTE Confidence: 0.717251925714286

01:19:32.541 --> 01:19:33.998 trip or will have a response.

NOTE Confidence: 0.717251925714286

01:19:34.000 --> 01:19:36.264 And in in particular I think one of

NOTE Confidence: 0.717251925714286

01:19:36.264 --> 01:19:38.565 the main aspect is really to accept

NOTE Confidence: 0.717251925714286

01:19:38.565 --> 01:19:40.883 the condition of the drug and to

NOTE Confidence: 0.717251925714286

01:19:40.883 --> 01:19:43.195 accept also to be high during a while.

NOTE Confidence: 0.717251925714286

01:19:43.200 --> 01:19:45.237 And this is something that is absolutely

NOTE Confidence: 0.717251925714286

01:19:45.237 --> 01:19:47.871 not easy to accept for many people and

NOTE Confidence: 0.717251925714286

01:19:47.871 --> 01:19:49.860 in particular patient because they are.

NOTE Confidence: 0.717251925714286

01:19:49.860 --> 01:19:50.650 Really afraid.

NOTE Confidence: 0.717251925714286

01:19:50.650 --> 01:19:53.415 And one of the questions for example

NOTE Confidence: 0.717251925714286

01:19:53.415 --> 01:19:56.877 is for people with trauma like whether

NOTE Confidence: 0.717251925714286

01:19:56.877 --> 01:19:59.383 the dissociative experience that they

NOTE Confidence: 0.717251925714286

01:19:59.383 --> 01:20:01.578 can really experience during during

NOTE Confidence: 0.717251925714286

01:20:01.578 --> 01:20:03.816 ketamine or I don't know exactly

NOTE Confidence: 0.717251925714286

01:20:03.816 --> 01:20:04.292 with psychedelic,

NOTE Confidence: 0.717251925714286

01:20:04.292 --> 01:20:06.359 we don't have a lot of data on that,

NOTE Confidence: 0.717251925714286

01:20:06.360 --> 01:20:08.480 but how it can be managed and will

NOTE Confidence: 0.717251925714286

01:20:08.480 --> 01:20:11.076 it be positive or negative for them.

NOTE Confidence: 0.717251925714286

01:20:11.080 --> 01:20:13.962 And also there is a decorrelation between

NOTE Confidence: 0.717251925714286

01:20:13.962 --> 01:20:16.356 the acute effect and the beneficial effects,

NOTE Confidence: 0.717251925714286

01:20:16.360 --> 01:20:16.632 OK.

NOTE Confidence: 0.717251925714286

01:20:16.632 --> 01:20:18.264 I mean it's quite striking straightening

NOTE Confidence: 0.717251925714286

01:20:18.264 --> 01:20:20.189 like some some of them will have very.

NOTE Confidence: 0.717251925714286

01:20:20.190 --> 01:20:21.390 Kind of battery backfilling,

NOTE Confidence: 0.717251925714286

01:20:21.390 --> 01:20:23.190 but afterward they will feel really

NOTE Confidence: 0.717251925714286

01:20:23.239 --> 01:20:24.643 good and some other will really

NOTE Confidence: 0.717251925714286

01:20:24.643 --> 01:20:26.396 enjoy the trip and they will have

NOTE Confidence: 0.717251925714286

01:20:26.396 --> 01:20:27.926 no room blasting with the effects.

NOTE Confidence: 0.717251925714286

01:20:27.930 --> 01:20:30.750 So there are several layers of

NOTE Confidence: 0.717251925714286

01:20:30.750 --> 01:20:33.056 response to that question, I think.

NOTE Confidence: 0.717251925714286

01:20:33.056 --> 01:20:33.269 Yeah.

NOTE Confidence: 0.582278756

01:20:35.810 --> 01:20:37.050 So it's still bad?

NOTE Confidence: 0.582278756

01:20:37.050 --> 01:20:39.688 Yeah. See this. Thanks.

NOTE Confidence: 0.582278756

01:20:39.690 --> 01:20:42.910 And measured by MRI like do you

NOTE Confidence: 0.582278756

01:20:42.910 --> 01:20:44.218 know approximately, I don't,

NOTE Confidence: 0.582278756

01:20:44.218 --> 01:20:46.010 I don't think the last and the reason

NOTE Confidence: 0.582278756

01:20:46.067 --> 01:20:47.675 I ask the question is thinking

NOTE Confidence: 0.582278756

01:20:47.675 --> 01:20:49.272 logistically in terms of but we

NOTE Confidence: 0.582278756

01:20:49.272 --> 01:20:50.676 have the best imaging as another

NOTE Confidence: 0.582278756

01:20:50.676 --> 01:20:52.582 tool not being able to measure.

NOTE Confidence: 0.582278756

01:20:52.582 --> 01:20:54.730 The occupancy of the party still

NOTE Confidence: 0.582278756

01:20:54.804 --> 01:20:56.640 do every sector and then getting

NOTE Confidence: 0.582278756

01:20:56.640 --> 01:20:58.615 a sense of how that occupancy

NOTE Confidence: 0.582278756

01:20:58.615 --> 01:21:00.649 in a specific area is related

NOTE Confidence: 0.582278756

01:21:00.649 --> 01:21:03.250 to what we see with the MRI.

NOTE Confidence: 0.582278756

01:21:03.250 --> 01:21:05.070 But I don't know if that's gonna

NOTE Confidence: 0.582278756

01:21:05.070 --> 01:21:07.890 be like along those effects last,

NOTE Confidence: 0.582278756

01:21:07.890 --> 01:21:09.516 is that something that we can

NOTE Confidence: 0.582278756

01:21:09.516 --> 01:21:11.119 see like 24 hours later or

NOTE Confidence: 0.695785028333333

01:21:11.480 --> 01:21:14.112 yeah, so most of the study that's

NOTE Confidence: 0.695785028333333

01:21:14.112 --> 01:21:16.349 explored the long lasting effect

NOTE Confidence: 0.695785028333333

01:21:16.350 --> 01:21:17.980 like they explored one week

NOTE Confidence: 0.695785028333333

01:21:17.980 --> 01:21:19.610 after or something like that.

NOTE Confidence: 0.695785028333333

01:21:19.610 --> 01:21:22.190 But I cannot remember something

NOTE Confidence: 0.695785028333333

01:21:22.190 --> 01:21:25.278 really long term in general the

NOTE Confidence: 0.695785028333333

01:21:25.278 --> 01:21:28.183 safety between two doses is so for

NOTE Confidence: 0.695785028333333

01:21:28.190 --> 01:21:30.638 study for example that are crossover.

NOTE Confidence: 0.695785028333333

01:21:30.640 --> 01:21:32.218 So for the clinical trial they

NOTE Confidence: 0.695785028333333

01:21:32.218 --> 01:21:33.270 really tried to have.

NOTE Confidence: 0.695785028333333

01:21:33.270 --> 01:21:34.790 Long time between the two,

NOTE Confidence: 0.695785028333333

01:21:34.790 --> 01:21:37.994 but for like from dental study

NOTE Confidence: 0.695785028333333

01:21:37.994 --> 01:21:40.100 usually they manage at least two

NOTE Confidence: 0.695785028333333

01:21:40.165 --> 01:21:42.613 weeks between 2 intake to be sure that

NOTE Confidence: 0.695785028333333

01:21:42.613 --> 01:21:44.919 they will not like the long lasting

NOTE Confidence: 0.695785028333333

01:21:44.919 --> 01:21:46.882 effect for the placebo or condition.

NOTE Confidence: 0.695785028333333

01:21:46.882 --> 01:21:49.206 But yeah it's I mean this question

NOTE Confidence: 0.695785028333333

01:21:49.206 --> 01:21:51.568 is not solved like we don't know

NOTE Confidence: 0.695785028333333

01:21:51.568 --> 01:21:53.568 exactly and we don't have enough

NOTE Confidence: 0.695785028333333

01:21:53.568 --> 01:21:55.710 data to to really answer how long

NOTE Confidence: 0.695785028333333

01:21:55.710 --> 01:21:57.795 does it last because you have like

NOTE Confidence: 0.695785028333333

01:21:57.795 --> 01:21:59.864 just the effect of the drug staying

NOTE Confidence: 0.695785028333333

01:21:59.864 --> 01:22:02.408 in the brain but also like I did not

NOTE Confidence: 0.695785028333333

01:22:02.408 --> 01:22:04.358 mention the effect on on synaptic.

NOTE Confidence: 0.695785028333333

01:22:04.360 --> 01:22:06.551 But it's probably also very important in

NOTE Confidence: 0.695785028333333

01:22:06.551 --> 01:22:08.560 particular for the beneficial effects,

NOTE Confidence: 0.695785028333333

01:22:08.560 --> 01:22:10.429 and this may be long lasting effects.

NOTE Confidence: 0.8285810575

01:22:13.050 --> 01:22:13.738 We have a couple

NOTE Confidence: 0.920733328

01:22:13.750 --> 01:22:15.050 more questions in the chat,

NOTE Confidence: 0.920733328

01:22:15.050 --> 01:22:17.696 but we are at 5:00 o'clock.

NOTE Confidence: 0.920733328

01:22:17.700 --> 01:22:19.540 It was a wonderful presentation.

NOTE Confidence: 0.920733328

01:22:19.540 --> 01:22:20.877 I really covered a lot of ground.

NOTE Confidence: 0.920733328

01:22:20.880 --> 01:22:22.780 Thank you. Thank you.

NOTE Confidence: 0.79761831

01:22:30.230 --> 01:22:32.330 I mean people can send me

NOTE Confidence: 0.79761831

01:22:32.330 --> 01:22:33.730 emails and have discussion.

NOTE Confidence: 0.79761831

01:22:33.730 --> 01:22:37.870 I would be very happy to.

NOTE Confidence: 0.79761831

01:22:37.870 --> 01:22:39.960 Yeah. Qualitative

NOTE Confidence: 0.626936698888889

01:22:39.970 --> 01:22:41.214 analysis of different narratives

NOTE Confidence: 0.626936698888889

01:22:41.214 --> 01:22:45.070 in our seeking treatment study, OK.

NOTE Confidence: 0.626936698888889

01:22:45.070 --> 01:22:49.340 Say. You know. And the model.