#11
Formal talk
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1 Hr 30 min
Recording 11

Y: Do you want to plug this in or not before we start? It is up to you.

B: I'll plug it in later, just like this, thank you.

Y: OK. Now we start for: 22

Y: Today, and before we go into the recursion question and all that goes with it which, is a lot, I want to read to you my usual introductory section to one of the papers. This is in 1998, in May 1998 in Lisbon, Portugal. There was a conference at the University of Lisbon which invited me to come and present a paper along with Goswami and about 10 or 20 other people. But it was a parapsychology conference. So they would let me in.

:58 1:19

And I'll just read the introduction that this paper was presented. It was written by myself and by Catherine.

> In proposing that consciousness is primary in science, we are breaking with the science of the last two centuries, and supporting the new science that has been dawning in the last twenty years. The old science does not investigate consciousness; whereas, the new science insists on consciousness being one of its key elements. In this decade this has lead to the serious study of consciousness. The mathematician John Von Neumann and the theoretical physicist Eugene Wigner were the first to formally point out that consciousness is required in quantum theory to reduce the coherent super-position of quantum states. That is, to index or select one of the many superposed possible states. This is also called the collapse of the quantum probability wave to the single state that is observed. The difficulty with their suggestion is that the conscious observer is assumed to be a physical human being which is itself a manifestation of conscious observation by something else which must itself have been observed in order to be an observer. And therefore an infinite regression of manifest observers is needed to allow quantum reduction to operate. In order to unify science and consciousness this conundrum must be resolved.
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> The natural philosopher Gottfried Leibniz in 1714 and more recently the theologian David Griffith in 1997, and the philosopher David Chalmers in 1996 have suggested that Pan-psychism might be the answer. However, Pan-psychism is based on physical things which, though conscious and originating actions are each in manifest states. And it therefore has the same difficulty as John von Neumann and Wigner's human observer suggests. The physicist Amit Goswami in 1993…

B: It is also very…ah… yes, I have read it.

4:24

Y:

> has suggested that the transition from the old to the new science involves a complete shift in paradigm from the model where in the basis of everything is a material world of matter, time, space and energy to a model that he calls monistic idealism in which the basis of everything is consciousness. We agree with Goswami that a major shift in paradigm is imperative. However, we think an even more radical change is necessary.

And before I came to this section on Goswami, he was off to sleep.

B: He ran away from the situation.

Y: How to get through a conference: Catch a little sleep when you can.

5:25

> We purpose a model wherein the basis of everything is a non-physical realm from which both consciousness and physicality arise, the second inextricably linked with the first. That is, consciousness (is) inextricably linked with physicality. The proposed non-physical realm consists of a large number of equivalent non-physical agents each of which is related to each, and each of which non-physically determines whether it is denying or not denying each of its relations on an individual basis. The not-denied relations form a network by which each non-physical agent from its position in that network is conscious of each of the non-physical agents that are not being denied, not as the non-physical agents that they really are but as the most fundamental physical particles. 6:43
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> According to the various patterns in the non-denied relations network, each agent is conscious of those physical particles as having various properties and being in various physical relationships, temporal, spatial, etc. with each other. In other words, even though the non-physical agents are all that really exist, they are conscious of each other as a world of physical particles and physical relationships. By their determinations, they transfigure each other and themselves to appear as our universe. The nonphysical agents from whom both consciousness and the physical world arise are absolutely fundamental.
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> And then the last words: 7:35 If the assumption that what really exists is a large number of equivalent non-physical agents and their determinations can, by successfully explaining how consciousness and physical things arise together resolve the dualism problem and can explain how quantum reduction works, and why the physical values are what they are, then this is favorable. 8:12
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> However, indirect evidence that the assumption is correct is favorable, but indirect evidence that the assumption's correct. The balance of this paper undertakes to give these explanations in brief.

8:31

While after I finished the presentation, I took questions and answers. They gave us plenty of time with a chalk board and everything. And all these university students that were there were asking questions right and left.

And the older men would cut in and say, “Oh no, no, no!” He is completely wrong.

B: I could imagine.

Bret: How did Goswami respond?

B: He slept.

Bret: You said until…

Y: He woke up about this time at the end. And he said, “Oh, thank you. Very charming.” He is a nice man; but he is not too bright. OK. Now we get serious.

B: I have him on CD.

9:52

Y: Keep this handy. We are going to need it: the chronology of events. Let’s see if we can put some light on it. We have a circuit. And we have already talked about… We get one-dimensional space from crossing over in these spaces. Go to every... They’re between one unit of space… between this individual and every other individual in the circuit, including this one. (Referring to points which he is diagramming on a chalkboard.)

B: No, this is the same.

Y: Well, we’ll see.

B: Ah yes, I see, maybe.

12:28

Y: Every individual in the circuit is connected through individual A here. So they are all connected to A. So whatever A is conscious of, they will also be conscious of. So they are conscious of everyone, every unit of space. But also, we said that this crossover arrow creates a unit of time because we have this to here and an arrow to here. And every individual in the circuit is connected to B over here. We’ll cross that out, make that C and this B. So we get (n) time units, little n which is the individuals in the circuit. This generates this. In the first realm out here in the margin, that is a good place for it. What does that say?

B: No time, no space.

Y: Yes. There is no time and no space, but there are connections going on.

B: Yes, yes.

14:27

Y: And we keep adding one arrow, one arrow, one arrow, one arrow, until we get something like this: a unit of time. So time begins at this point; but there is no space because there is no bifurcation. Now the square root of 2 (N) is what you need in order to have a unit of time. But this also applies to this structure, like this. But it is a bifurcation. But it doesn't give you space because these are not in present time. So the square root of 2 (N) is how many arrows you need to have one unit of time. And if we assume that it's one Planck time, the square root of 2 (N) is 12 point something arrows times 10^{12}.

B: This is M of 2, square root of 2 factorial. This is n 2 to -1.

15:55

Y: Right and that in terms of seconds here is 10^{-43} of a second which is Planck time. Its 5.7… dot, dot, dot. It would never show up on this graph. So that's when time begins. Before that, there's no time at all.

So people say, "What happened before time began? How did time start?"

Well, it does say how time starts, but it doesn't say what was going on then because there's no time. But there's phenomena that's going on. There is consciousness that these individuals have of H ● (dot) and so on; but they're not located. 16:56 Those particles are not located in time or somewhere in space. They just have a consciousness of a proto-fermion. You can't even say they are point-like particles because point-like implies the lack of extension in space. But here we get this first moment in time. Now, 17:39 this is a brief history of the universe; and this is start place. They know something's there, but they don't know what. So what do we have here? 10^{-43} which is what we have here. And this is the temperature. T is the temperature here. And then this progresses along through time.

And then we… Ah, yes, we will cover all these things as we go along. But you notice that according to the Lila Paradigm, most of the coming-together connectivity occurs in this portion here. 18:39 And this is the point of inflection, right here. If you look at the time, we are talking about 10^{-32} of a second. And where this curve stops, that's the current time. That's now because all the ones that are in to the circuit and the ones that are left out of the circuit, we're not measuring their time. But the ones in the circuit with little n, this is the time. So the time now in terms of the one crossover of the circuit is about 5 X 10^{-32} of a second. 19:36 And that's so called 'now' according to one arrow crossing. But there is more that one arrow crossing over from a single individual. This makes the second dimension; but it not only makes a second dimension, it also squares the amount of time units. That is, for every unit of time generated by this arrow, there's (N) more for each one of these time units. There are (N) times that. So what we get is... I have to get my… (calculator)

20:47

B: This is because what is A conscious of, all are conscious of. This is the reason why. I mean I understand, yes. We have the sequence B is in a state of direct consciousness of A of C. Because of the presence of time of B and C, A is in the memory and this is one unit of time. And because they are all in a circuit and because what A is conscious of, everyone is conscious of. Because of this for all of them, it is the case. And when we have a bifurcation, then yes, we have n^2.

Y: Little n^2 time units.

B: And the reason of this is the fact that what is A conscious of, everyone is conscious of.

Y: Yes. So we have n^2.

22:00

B: How is this moment, so to say, now conditionally speaking, because moment implies time. By adding arrows at one moment, we have this structure and the beginning of time. And this is all clear; this is according to Lila Paradigm. But actually how exactly is this associated to this.

22:24

Y: By an assumption. That one unit is equal to one Planck time. Now we could go into the definition of one Planck time and show that anything shorter than one Planck time has gone into a singularity. And this is a singularity here. Temporally speaking.

22:49

B: Yes, actually at the moment of time, I thought so. Yes, OK. Anything shorter leads to singularity.

Y: This is the end of the first one. And now we have n^2.

B: Yes, because F of 2 is expected time to connect to another.

23:33

Y: Now time starts at about 10^{-30} of a seconds or a little less than that, and goes like this, the curve goes. Now what I have done is put these all together here. So this is so called quantum realm. This is the start of the first recursion of it. And this is the start of the second recursion; and this is the time in seconds. We will study all this out.

24:17

B: The second recursion, but you have F of 5 here, because to my understanding F of 2 is expected time for a second choice to take place. A second non-denial, for instance, are just connections like this one.   And now there is an expected time for a second non-denial to take place. And this is OK. But for the second bifurcation, isn't it F4. for instance, because you said it is n^2?

24:56

Y: Yes, but now we are in a circuit. But we'll get to that in a minute. But if we take another one here, then we have one, two, three, four, five.

B: Yes.

Y: So it is F 5.

B: It is four because these arrows are going this way. And this is in, this is out-going and this is in-going.

25:27

Y: No, this is the individual that we are talking about. We will call this individual W and he is connected here. He is connected to one, two, three, four. That makes…

B: Four.

Y: That makes five. But we get three dimensions because we are going here. But this sub-state consisting of this, this, this, and this, and this is five.

B: But this is actually a fork. This, this, this and this is the structure. They are five but…

Y: So I is equal to five.

26:08

B: But as I understand, F of 5 is expected time either for one individual to become instead… To enter the state of direct knowledge of 5 or which is the same and it is a great insight made by Baker. It is the same as the expected time that 5 other individuals become aware of this particular individual. So either the arrows are out-going or they are in-going to one individual. The expected time is the same; and it is F of 5. According to this, we have here F for 4. We have here F for 4, F of 4 not F of 5. Here the structure is.

27:06

Y: They are equivalent. They are equivalent. When I was showing you this, this is F2, is the same for both. It doesn't matter how many arrows are in the sub-state.

B: OK, you just said the degree of the note.

Y: Yes, it is the degree that matters. And I talked long and hard with Michael Baker about that and he agrees.

B: OK. Finally, because he differentiated between.

Y: You are good to catch that point because this comes up with anyone who really looks at it seriously. But that is why.

B: OK Great.

27:56

Y: Alright so now we have… This turns out when we calculate out the time here. It comes out to about 10^{17} seconds which turns out to be 12.7 billion sidereal years… which is now.

B: Ah, so this is why it is now. Because I wondered… Ok, it is positive; I haven't noticed it is… The exponent is now positive, all of the sudden. Because ah…

28:38

Y: So this is 'now' for one. This is now for the first recursion which turns out to be at a very important time in the history of the universe. It is the time when the quark confinement is achieved. It's also called the electromagnetic transition that takes place. We'll go into that. This may help.

29:15

B: It helps because time exponent is positive here; and on this picture, you have still at the inflection point, you have 10^{-31} of seconds. This was confusing. And you said, it is 'now'. Here it is clear, but here you have 10^{-31}.

Y: 10^{-31}.

B: It should be positive; the exponential should be positive.

29:41

Y: No, we are talking about 10^{-31} of a second which is a positive value. One second is way down the line. I have one second here some place.

B: Here is one second.

Y: So that is not even on this chart. This chart is just this part here.

B: Yes, yes. But it is not 'now'; it is 10^{-32}.

30:19

Y: Yes, it is now. And that is you actually in your consciousness, right now, are in that state. You're in this state. You're in this state, and you're in this state, and they're all joined together into one state of consciousness.

B: OK

31:00

Y: You can read this. This is this same curve drawn on this scale. And that says, it's a mental realm. And this is the virtual realm where electrons and positrons pairs come into existence. They're there for a short time and then vanish. This is Feynman's work where he had all the virtual realm where particles, due to quantum theory, are popping into existence and out of existence, as long as the time is short enough. That's this section right here. What does this say? Chiro confinement?

Bret: Yes

32:07

Y: That's where... After this point then the quarks are confined either in the protons or in a neutron or in a mason. But before that we have quark soup. OK.

32:47

B: When you say now, you mean illusion of now, and it is all the way and also here.

Y: No, it is at this point, at this point, at this point is 'now'. This is history, this is history, and this is history, behind the now. What does this say?

Bret: Imaginary realm.

33:12

Y: That's in here. That is the imaginary one that was suggested by Hawking. They talked about imaginary time and imaginary space and how they flowed back and forth between the two of them. And he's right. This recursion here is where the stars start to form about this time, and then galaxies. And it comes together, as it is now; they evolve, and end up as they are now.

34:31

The histories that they have in this chart, is covered from here on. This part here is here back, like one second. They have here one second; they have one second about in here some place. But they don't have stars forming at the one second.

B: Here is one second.

35:05

Y: Yes. So that is here. Now, I am going to lend to you these curves over night and you can study them.

B: OK. Thank you.

Y: So we can fill in another part here, that's important.

Don: May I scan them at lunch.

Y: I thought you had all.   Well, you don't have these separate.

Don: I don't have any of those. They are different.

Y: Well, you can scan them during the break. There's not much of a break today.

Don: I understand.

35:57

Y: OK. Now this part here is interesting. You see this says… These are the grand unification theories project these kind of curves. Just like that. I have a whole book on it here. And the Lila Paradigm, it says one dimension here. This is the first crossover, occurs at this point. Michael Baker.

I said, "Mike, you calculate at what time the first crossover can be expected."

And he when back to his house and came back three days later with his hair practically torn out. But he got the right answer. I have his notes on how he got the answer. And it's at this time, 37:00 this number of arrows. And that is a significant time in detail. But it gets even more interesting after the second crossover occurs and we have two-dimensional time, two-dimensional space, and three-dimensional space not long after. And then I thought this looks like something I've seen before. This is a blow up of this part here. It says it's between 10^{-32} and 10^{-31}. So, just this part here to here, this is the part where most of the connectivity takes place, indirect connectivity. And what, can you read?

B: Start of unbounded space/time from one crossover, boson.

Y: Well, that's equivalent to this point here. And what does this say?

B: Circuit monopole core.

38:18

Y: So it's the circuit not crossed over. Now in the Grand Unification Theory they have figured out what the diameter of that core would be, if their assumptions are correct. I figured out what it would be if we imagined that it took some space. But it doesn't take any space. But it's the imaginary space. And this measures space. And it comes out here to be log 40.

B: Log 40 yes.

39:09

Y: Yes. Here's F 27 with 27 crossovers from one individual. And this is just... I think what is left off of here is that this is…

Bret: No, this is space. This is something else, LQ.

Y: LQ is a length quantum. Yes, this is in centimeters that are what I was looking for. So it's 10^{-30} of a centimeter.

B: Yes.

Y: Would be the diameter of that core. That agrees with their figure and then around the core of the monopole. Would you read that again for me?

B: Start of unbounded space/time from one crossover.

40:11

Y: First crossover. This is what they call the X boson. It's a very powerful energy boson. It does get energy though. But they think all of the three dimensional space goes back to point one. Where this is one dimensional space doesn't even start until the crossover. There is all these little bits and pieces of space back here. OK. Now, these numbers here describe which paragraph in radical theory paper discusses each point. Ninth paragraph, discusses this section in here. What does this say?

B: Start of unbounded space/time from two crossovers.

41:05

Y: Yes, and now here we get what is called the w plus or minus boson. Now that was discovered in 1972. And it was predicted by the standard model which is the Grand Unification model that turns out to be correct. And it has... had occurs... It's a shell that is around the core and these bosons.   It's the reason that W is used is because it's a boson or an arrow that creates the weak force. Remember the weak force is the one that is adjustable by how you choose it. Alright and that... This curve agrees with their... the size of that shell and agrees with the time in which it should occur. And this one is Z zero. Read that.

B: Boson shell start of unbounded space/time from three crossovers.

42:22

Y: Right. But however, when you have a second crossover and a third crossover, the time here is not this time. This is time as if it were one dimension. So we leap from this point instantaneously and not by any time at all over to this point. It's actually up in here some place. So the time is… so we have the two-dimensional time, so to speak, or the first recursion time. And the original pattern time are superimposed on each other. So they would get this measurement out of their accelerator… actually not. They only get it out of the second recursion up where you have three-dimensional space because they make their measurements in three dimensions. 43:31 But when I drew these curves, I did it to carry through the curve; otherwise, I had to draw a line. And we probably could do that on the one that has them all together and patch these other graphs over here and here. And then draw a dotted line showing that it extends over.

44:00

B: May I ask just something? Here, for instance, it is clear to me that F of 2 meaning the expected time for an individual to choose a second individual to be in state of direct knowledge of, and these implies bifurcation.

44:18

Y: It is the other way around than what you said. It's not the time you would expect them to make that choice. They make the choice and that's the time. It makes the time.

B: They expected no time, they expected number of arrows.

Y: Yes.

B: Needed for this actually.

Y: Yes.

44:42

B: This is what I meant. Expected number of arrows needed for this. But here, at the start of unbounded space/time from one crossover which is this one, we have F of 27. Does it mean that… in order to have the first cross over the circuit? Because in the beginnings now conditionally speaking, beginning, in the beginning with a certain number of arrows, we have just a circuit, not having space yet. And does it mean that this circuit should have, for instance, 27 arrows.

Y: No, no.

B: No? What is then F of 27?

45:26

Y: I'll show you. This says F 7 here. Here's F 27; the first circuit is already formed.

B: Ah, these are the length, Planck's time, the lengths of circuits, the number.

Y: The length is this way and the time number of arrow is this way. Both are always involved, both time and space.

B: Does this imply…?

46:00

Y: This F 27, now the circuit is grown. We kept adding arrows and the circuit now has…

B: 27 individuals in it?

Y: No, it has billions of individuals in the circuit. And one of the individuals, at least, has 27 arrows coming out from it alone.

B: Yes, this is the original thinking; and this is what I understand.

Y: Yes, but this one here, the circuit is small. And there is only thousands of individuals in the circuit. But one of the individuals has seven arrows coming out from it.

46:42

B: But they don't crossover the circuit.

Y: Yes, there are 27 of them coming across the circuit. There is a circuit.

B: So here when we have… At this point, when we have F of 27, we have a circuit and one individual getting 27 crossovers.

Y: Yes, 27

B: But isn't this more than one dimensional?

Bret: One crossover, 27 crossovers, contradiction.

47:28

B: Here we say, "This is the start of unbounded space/time from one crossover. One crossover is this, not this."

Y: Ok, it's not a contradiction; but it's an incomplete statement. If we take this sub-state here, there's only three. And we could take another sub-state and there's only two. And we could take this one, and it would be one. If we take one…

B: Ah, maybe 27 is 3 to the 3rd degree somehow.

48:09

Y: No, no. It's a coincidence that it is 27. It is… This is a sub-state. And taking this into consideration you get the first crossover here. But if you take two of them, you get to the second one; and three you get three of them. So when we are talking about space and time, you get that. But when you are talking in terms of 27, that is the total amount; it's not a sub-state. 48:54 So, I've got apples and oranges mixed up. But it is not a problem because of the sub-states. In other words, what I am plotting, I'm plotting two different things here together. As a matter of fact this isn't even happening because we're over here and at a different time. And you have to help me sort it out about which is what. I'll give that back to you so you can write because we have the consciousness of one thing and consciousness of another time, and consciousness of another recursion. And these can be combined in various ways and are in your consciousness. And they certainly are in mine. And I've got, like this graph has got two of them. 49:58 This one over here has two different ones. This one has three. But the spaces coordinate is not proportional. I'm trying to give you an outline of what I've done. And then the idea is to sort out my problem. And this is where I need your help. But you don't have to give it. You don't have to come up with anything. I'm just trying to share the Lila Paradigm with you. And you respond in whatever way you do or don't. 50:41 I think the thing is I studied this for months and months and months and months. And so you're expecting within an hour to grasp all this, is ridiculous. But I am just trying to give you the outline. If you study it, then you come back tomorrow or this afternoon if you come up with anything in the meanwhile. So if you keep pointing out contradictions like you did then, OK. And it is valid. But it is not valid because there is an explanation behind it. So that's the difference. Some people when they find and error, they throw the whole thing out.

51:34

B: May I say something because I was reading Baker's paper. I have seen that he is very rigorous. Maybe this means because it should be consistent, you know. I have seen that F for his expected number of arrows for one individual to be in a state of knowledge.

Y: That's correct. That's right.

B: And at the same time which is great insight. It is the same probability for the number of arrows or for the number of individuals to be in state of knowledge of the particular individual.

Y: Yes.

B: So either outgoing or ingoing, the probability is the same?

Y: Yes.

52:16

B: Now in order to have a first crossover in the circuit, a certain very complex situation could occur regarding arrows. And this is the circuit should be closed. This is also a pattern which requires a great number of arrows. And maybe this number is 27 somehow before the bifurcation.

Y: It is somehow because…

B: Because of the probability. For instance, you have these,

Y: That makes the time.

52:53

B: There is time, yes. But maybe you're now speaking in terms of probability and number of arrows. Maybe you require a greater number of arrows in the circuit before the first forked structure appears. When explaining to Lila Paradigm which is excellent for pedagogical reasons, in order to explain it, you give us the smallest possible configuration of arrows for one-dimensional space, unbounded space. And this is OK. But maybe the probability for this structure to appear is smaller than the probability for this structure, maybe in terms of 18 arrows, in order to obtain a certain pattern. We have arrows, arrows, arrows. First we have this, and then by adding 54:00 arrows, we got this in perception of time. And then, we got the circle (circuit). But maybe in order to have a circle (circuit), maybe this pattern, which is the minimal needed number of arrows for a circle(circuit), which is 4, maybe this pattern is far less probable than this one which the case actually.

Y: It is the case. Actually seven is the optimum. It is the most likely

54:34

B: OK this is a new information because we have here F of 7. We had here F of 7. Here, start of inflation. So we need 7.   And this is maybe why radical theory you have here illustrated this definition of space.

Y: That's one reason.

B: So the probability to have circle (circuit) is bigger when we have 7 arrows or this, this is less probable.

Y: Yes, it is.

B: It is less probable. So although this is one dimensional, it is very nice to grasp.

Y: You can have one dimension here too.

55:21

B: Yes, yes, I'll have one dimension. I don't say no. But I am suggesting that maybe first. Now speaking in terms of less probable… The probability is greater for a circuit with greater numbers of arrows to appear, then the probability of crossover. So by adding more, and more, and more arrows, first we obtain a circuit of greater numbers of arrows and then only because this is... The probability of this is small. So we need a great, great, great, great number of arrows to be added, in order to get circle (circuit). And after we get the circle, (circuit) we got the first crossover.

Y: I just want to correct your English. This is circuit.

56:19

B: Ah, yes, circuit. So maybe I'll check in his paper. Maybe he found out that according to Poisson distribution, we need 27. We need a circuit made of 27 arrows prior to having a crossover.

Y: Yes, he did find that out and in fact it turns out to be 28.

B: 28, OK, whatever.

Y: This is explained under paragraph 8.

57:00

B: Ah ha. This is great. So this is correct, so this thinking is correct. This is great structure, this minimal structure of 5 you are giving for one dimensional and it has meaning in the light of Lila Paradigm. But when introducing probabilities, we need more than just 4 arrows in the circuit in order to get the first crossover to appear.

Y: You have to realize that there is thousands and tens of thousands, hundreds of thousands, millions of arrows, trillions of arrows.

B: 10^{20} which is tremendous, in order to have the first circuit of seven.

58:02

Y: Yes. Because there are so many individuals there is so much space, so to speak, or opportunity that they don't connect at first, very, very thin.

B: They are disconnected. They are disconnected.

Y: Very disconnected because there is so much potential for connection.

B: Yes, yes. So 10^{20} arrows are needed in order to first circuit of seven arrows to appear.

Y: Likely expectation time.

B: And these figures is very rare, it is even more rare.

Y: Of course, this could happen but this is more probable.

59:27

B: This is more probable, yes, my 37%. You see, I was right. I haven't seen it before. I kept repeating. You know that one over E is 37% and it has to have meaning. And here you are.

Y: You're right.

B: I haven't seen it. I know this from this curve. We have this and this and this. And this is 37%. And this is one over E because this formula is one minus A to minus T diagonal. Differential T = 0A to –1 and this 1 – E,

1:00:21

So approximately 1 over E or 37% are leaves in most trees. Leaves are in graphs this final which are disconnected.

1:00:56

First circuit he has a separate chapter on first circuit. And let us see for the first circuit. This is how he found. He has a chapter on first circuit. So he is using probability calculus to find the probability for the first circuit to appear.

1:01:20

Y: This is the one he was pulling his hair out to figure out. I told you I ask him to do it.

B: And finally he discovered it is 7, and this is what F7 is.

Y: Yes. You're right.

B: And it is 0.9 of all the individuals.

Y: (acknowledges)

B: In order for…

1:01:48

Y: We checked this with the computer program for 10,000 I think (n10.000). And it came out .88 or something like that. It is a little different than his number.

B: So I am glad that we are… the thinking is.

Y: We used some approximations in this, I think.

B: But the thinking is correct.

Y: Yes.

1:02:14

B: We need 7. We need actually 0.9 multiplied by 10^{23} arrows, which is tremendous number. In order to have the first circuit closed.

Y: Right.

B: Out of 7

1:02:35

Y: And that circuit is going to grow even some more as we go from the first crossover here to the second, and third and then on up here and how it is now. In fact, listen to this before you read that. There's also other circuits that form here and there, different sizes, 100,000. But as you progress here and add more and more, those circuits coalesce. You know coalesce, merge together?

B: Yes, yes.

1:03:16

Y: Until finally there's two big groups and there's one arrow that goes like that and wwahp! That happens right here. The, the monopoles coalescing so there's one common universe for all little n individuals. Before there was this one in their universe with billions of people, billions of them here or angels if you want to think of them like that. And this universe is just manifesting. Owiia. That's if you are progressing time in a routine manner. In an orderly way, that's not what happens. But we'll talk about that another day. So now you go ahead with this.

1:04:14

B: OK. This answers my questions. So it is correct. It is all correct. We need maybe 27. We need 7, you see. We need 0.9 multiplied by 10^{23} number of arrows in order to have the first circuit.

Y: First circuit. Yes.

B: Then we have second circuit of 8, and the circuit of 6.

Y: And then we have more arrows. Then we get our first crossover.

B: And in order to have the first crossover, we need 27 arrows into the circuit and then the first crossover maybe.

Y: No, and then, here's the first.

1:05:00

B: Because he has said 27 and after this he has the first crossover in one dimensional. So we first need 27 arrows into the circuit. The probability to have a circuit is lesser than to have the probability to have a crossover into the circuit because it is a more complex structure. So we need much more than just 7. We need 7 for the first circuit, but 27 arrows into the circuit for the first crossover to appear. And now it is all correct. We have here. No discrepancy now.

1:05:53

Don: May I say something now?

Y: Yes.

Don: Biljana. Isn't the probability the same for any configuration of arrows as long as we have the same degree?

B: Yes.

Y: Yes.

Don: So when we are talking about F27 all we're saying is there's is one individual with a degree, one node with a degree of 27.

B: No, we are talking about, about the circuit, about the circuit having 27 individuals. Because in order to… this is one structure. We'll have structures like this, many. But it takes a lot of arrows in order for this structure to close up.

Y: There has to be 27 crossover arrows.

Don: Ah um.

1:06:48

B: It is not like this one. It is not that one individual has 27 connections or non-denials or which is the same 27 individuals being in a state of direct knowledge with that particular individual. This and this is the same.

Y: He is suggesting that any configuration of it would be the same.

1:07:11

Don: Yeah, well in paragraph 8, F27

B: Ah, yes, as you said this and this is the same. Maybe.

Y: Yes

Don: On F8 it says, you would expect at least one 7 arrangement most likely to consist of 7 agents, not 27.

1:07:28

B: Yes, yes. This makes the calculations easier because then for a circuit he. But no, no it's not correct. It is correct to the point that we could have a sequence of 27 individuals and a sequence of 27 individuals. Probability for this to appear is the same as to have 27 outgoing or 27 incoming arrows. This is the same with this and this and the same with this. But the circuit, not. But in order to have a circuit takes many more. Many more.

1:08:10

Y: Many more.

B: In order for the first circuit to appear.

Don: We need a configuration of 27 arrows. It can be anyone. It can be this, it can be this. At that point, we will likely have a circuit most likely of 7 when you have this. This might not even be connected to the circuit.

B: You mean when we have this configuration of 27, the probability of this is the same as having circuit of 7.

Don: Yes.

1:08:49

B: Maybe but we should know.

Don: That what. If you look at paragraph 8.

Y: That's what I said.

Don: Just have to have 27 which is a configuration. We can expect one of 7 agents of 7 arrows here. OK?

Y: Now, I said that and that might or might not be true.

1:09:22

Don: All we are saying is these events are probabilities are the same. So the events looked at temporally are coincident. Roughly.

Y: That's a question that should be settled. And I want her to inspect it. You can look at that in your own time and decide for sure whether it's true or not true.

B: OK

Y: Just because it is in print, doesn't make it true.

B: OK Thank you.

1:09:54

Y: OK, where, were we? We were in the middle of gaga land. It's interesting that these monopoles, I said these other circuits, they all coalesce. And you end up with one. Now the theory of monopoles says there has to be at least one. But they searched for them, but they couldn't find them because they thought they would be located some place in space. 1:10:27 But as you can see here, it is not located in space. It's behind the scene of what really exists. And the projection in the consciousness is the magnetism and the light and the forces that attract and repeal each other including the weak force. 1:11:00 That's quite a subject, the weak force and the W and Z bosons. I think it has to do with the arrows that are in the circuit rather than the crossover arrows. That is a speculation. Now what did we want to do? What I want to do is give you all this stuff and have you look at it and see what you come up with. 1:11:35 Do you have any further questions or clarifications? It is not all there and don't believe every thing you read. But see what you come up with. And we will talk about it and discuss it. I think I had one last thing to do here before we end for this period.

When on the last chart, the big one, yes, when you come here, current time. He gives the formula. What does it say? C n Cubed

B: Ci, Current time.

1:12:32

Y: What does C stand for? Crossover. Number of crossovers cubed times the time unit. The fundamental time unit gives the current time. Yes. What was I talking about? Oh yes, and that it comes out to be 12.275 billion years. And then the WMAP (Wilkinson Microwave Anisotropy Probe) people came out with their 13.7 billion years for the age of the universe and the measuring the Cepheid's ('*sefeeds*'). They come out with 15.1 billon years to 12.1 billion years in there some place. 1:13:46 The globule clusters are... their estimate is 12 billion years. And the uranium to… The uranium decay rate in the stars has a variation from between 14.5 and 11.5. And that gives an average of 12 point…. no an average of 13. 3 plus or minus .7. And so taking the average of those different measurements, it is close to the value that we get here by using that formula. I think this is explained in Radical Theory.

1:14:54

And then finally Steven Weinberg said in Dec 1999 in Scientific American. He said,

> A unified theory of all forces will probably require radically new ideas. Space may be replaced by a continually reconnecting structure of strings and membranes or by something stranger still. The discovery of the unified theory of all forces will probably not be possible without radical new ideas.

1:15:41

So the Noble prize winner in physics for the standard model says, I can't even think radically enough in order to conceive of it. I can only know that it is going to be something radical. Penrose has said the same thing. So people, students, post doctorates are making proposals right and left and center, and none of them are radical enough to do the job. This is so radical that we'd be lucky to figure it out. But we can't do every detail. But we can do some of it. And then if we can get some grant money behind it from the governments of something then maybe something important might happen. If not…

B: This friend of mine might provide. From Sydney.

1:16:43

Y: Well, that might be an opening. An opening. I don't need money. I have enough to get by on. But for the people to work on it like this guy here (Bret), for instance, for example, while this guy (Don) has given up on the world. Which is smart! Well, then they could work on it full time and dedicate themselves to it and see what we can come up with.

B: This would be great.

1:17:19

Y: Then more people would hear about it and they'll want to join in. Then it will run by itself. OK. What would you like to do now?

1:17:37 End of recording

B: Whatever you say.

Additional recording from a second tape.
1:18:28

Y: I suggest you look at these and read radical theory along with it where I have those numbers. This says 8, 9, 10 under chronicle of events.

1:18:47

B: So maybe we should. Now I am back to this 27 and 7. Still Baker has done it clearly. Maybe where you are saying that… Approximately at that time, we should expect this first circuit. Maybe this should be corrected somehow. And put… adjusted to be in accordance with what Baker has found because you see…

Y: Yes, We are not going to change radical theory.

B: No, no.

Y: It has already been spread all over. But in a new theory. In a new revised form then we can do all kinds of things. We can do whatever we want.

1:19:43

B: Because the thinking is right but not the numbers. You know here, of course, here the part that you just read to me.

Don: Yes, that's…

1:19:50

B: This is resolved by Baker. This is not question mark. This is resolved because he has found F7 is here, and F27 is here. F7 is needed. There are 10^{20} arrows needed to in order to have the first circuit of 7 but in order to have the first crossover in to the circuit, you need 10^{23}. So this is known. So this is known; it is found. So this notion should be somehow adjusted in accordance to this.

Don: I don't think that F7 is the first circuit.

B: No, No, the first crossover. For the first crossover to appear, a circuit of 27 is needed because this is a very complex pattern. But in order to have the first circuit, 7 is needed.

1:20:53

Don: Well, to have 7 is needed, but the F7 that is unlikely to happen at F7.

B: OK, F7 is this. F7 is 7. Any, yes.

Don: It is any. It is anyone. This is a specific one out of all the possible configurations of 7 that one could have. And so that will happen much, much later.

1:21:18

B: But there is an additional information given here. First circuit so in radical Baker page 21. He has a whole chapter devoted to finding the probability for the first circuit to happen. And goes, goes, goes and he finds 7. He finds out that when you have 7 individuals in a sequence or 7 incoming arrows or 7 outgoing arrows then you have the probability for the first circuit to happen.

1:22:00

Don: No it says, can be expected when Q = .9 and expected the length can be expected to be 7.

B: But the length is the number of arrows.

Don: Yes, but that doesn't say that the… it would happen at the first time you would have any configuration of seven.

B: No, I don't say it happen when any…

Don: This is a much later time than F7.

Bret: 90% of the total population.

B: This is what I am saying 90%.

1:22:31

Bret: Number of arrow, number of arrows isn't it?

B: Yes, yes.

Don: So that. We don't have a number of arrows here do we. Do we have?

B: OK, This is not maybe the first circle (circuit). This is just F7.

Don: But that's. You see, that's the difference there.

B: But ah. I am saying the first circuit because this is the chapter, first circuit.

Don: Yes.

1:23:01

B: The first circuit with will appear. The first circuit will appear.

Bret: When 90%.

B: Yes, yes. This is this, and this is this number. When we have 0.9 multiplied by 10^{23}, we have this much arrows. Then we could expect the circuit will close itself.

1:23:25

Don: Yes.

B: And this circuit will be of length 7.

Don: Yes.

B: Which means 7 arrows practically because by assumption as Charles said. By assumption we have the length…

Don: But we can say at that point, we would expect to have at least one configuration of 27 arrows.

B: No.

Don: Yes, I believe so.

B: But this is not said here.

Don: But that is what is said in the paper here.

1:23:58

B: But ah. But Yogeshwar just said he has written it and not taking into account this possibilities.

Don: F27 is 90.9 in which is what you have here.

B: Is what I have here. Ah, ah this is new information. OK. Great! This is new information.

Don: So it is the same. This isn't something made up. See F27 is 90.

1:24:26

B: Because of this, because of this, because, because and now you have this. This is a new version of that.

Don: No. This is the one you have.

B: This is a new version of that

Y: You should have it.

B: So this should be stressed. For this very number.

Don: Which is F27.

1:24:50

B: Which is this 0.9 multiplied by 10^{37} which is needed for 7 hour. For the circuit to close. This number is the same as the expected number of arrows for structure of 27.

Don: Yes.

B: In any form.

Don: Yes.

B: Great. Because this number is the same.

Don: Then you can easily imagine why it coalesces so quickly because we have all these large configurations.

Y: Woowp!

Bret: Few choices left relatively.

Y: There are a lot of choices left but they don't change (--)

(Two conversation going on at the same time)

Don: the crossover occurs relatively shortly after.

Y: ( )

1:25:39

Bret: In terms of filling in the conductivity.

Y: The conductivity is done essentially. I think 100,000 part or something like that. Worst than that 100 billion parts is left.

1:25:58

Don: Lots of numbers. That he should give. OK. Well, that would make sense you would need more. More than (N) total choices to expect the first crossover. Does that make sense, Biljana? See, what we are saying is that it is more than (N) number of choices. But that's conjecture, so let's see what it says in here.

1:26:56

B: Maybe, because 23 it occurs just like this. Not maybe but sure.

Don: You see here he has 1.5 a slightly larger number.

1:27:06

B: Because the first crossover is after if this is the conductivity curve. This is [I], this is (N). Pardon, this is 6. X which is conductivity. When [I]. When (N) is [I], then we have this. This is like a… These are negative. And these are greater than one already. So in order to first forked structure to appear.

1:27:39

Don: Well, the first…

B: This is negative.

1:27:42

Don: Here we are talking about the first fork that crosses over the circuit, a circuit. Not just the first forked structures. There'll be many forked structures long before that, little universes with their own little bits and pieces of time and space. But we don't have any common universe until this point. And then at this point, we have a crossover.

1:28:10

B: Here is (N). Here is (N) = 1. Here because we have here 10^{23}.

Don: Ha Hum.

B: So these are all greater than one.

Don: Yes. F27 should be just before one. I guess the graph might be a little flaky here.

1:28:33

B: It should be here.

Don: And then the 1 D just after one there.

B: Yes, because this is one. This should be at 0.9 of (N).

1:28:45

Don: I'll have to correct that graph. When I do them out, obviously I must have missed the scale by a little bit. That's the original so…

B: This should be here.

Don: So we we'll adjust it.

Don: You were talking about Lila this morning. I thought you might find that interesting.

1:29:28