#13

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Recording 13

Y: Chronicle events?

> Even though the information model explains that the experience of time is actually due to extant embedded conscious states being experienced as earlier and earlier memories. For ease of language in this section, the customary way of thinking about time as a pre-existing background that progresses from earlier to later is used.

Just because it fits to language instead of saying so many millions of arrows in the past.

> Modern science assumes that the laws of physics, the equations of fundamental dynamics, remain the same as one goes back in time even to the instant of the beginning.

They think the speed of light is the same; they think the value of alpha is the same. They think that the three dimension is the same, they have all these… It's all the same, all the way back, as far as they are concerned.

> According to the inflation theory at about 10^{-31} of a second the speed of light begins to slow. And at about 10^{-32} space and time begin to fragment, and mass and energy cease to exist. And by 10^{-40} of a second space ceases to exist. And finally at about 10^{-44} of a second, time ceases to exist. Concerning the beginning of time, science has no comment to make. In this information paradigm that beginning didn't just happen. It was caused by agents who as a whole not denying or being in a state of direct knowledge of a certain number of their information states. The following is a summary of the physical phenomena produced in the consciousness of the agents as their collective non-denials increase, starting with the first moment in time, and ending at the present time. The numbers in graph B, C and D, are coordinated with the numbers that head the paragraphs.

So you have C and D and B and they have numbers and that heads the paragraph. So we are going to take up number one first which is this one. It's off the graph.

> 1. As indicated by graph B by the one.

This one here (points to graph).

Being placed off the graph proper. Agents of the non-physical realm may model where there are about 10^{23} agents.

Whoops!

B: You have skipped.

Y: I did.

Maybe collectively not denying up to a total of F2 or about 4.66021838 da, da, times 10^{11} of their information states, and none of these non-denials such as A arrow W ● and L arrow R ● produce time.

So they don't produce time.

Although each agent with a non-denial is conscious of a unit of physical matter such as W • and R •, proto fermions.

Well, that's the first number. The second is number two.

2. If, however, if any agents (physically?) acts not to deny one more information state, the first physical event can be expected to occur in the consciousness of one agent. This event is a fragment of time in a baby universe. It occurs if the agents are not denying at least 4.66021838 to go to ten places times 10^{11} plus one, of their information states. So that one of the agents in the non-physical agents can be expected to be conscious of at least one proto fermion existing at the agents own present time as produced from an arrangement of two arrows such as A arrow W • arrow [I •]. Thus one agent, agent A in the example is conscious of one TQ or that is time quantum of time having passed. From zero time when W • existed to the present time when [I •] dot existed. Since zero time is a result of F2 non-denials and F2 TQ are equal are equal to one Planck time, zero time is set equal to one Planck time. About 5 times 10^{-44} of a second. And the time after 1TQ has elapsed is one Planck time plus one time quantum which in the example is agent A present time.

So that W is at zero time and [I•] dot is at existing at 1TQ later. So time has been going on for 1 TQ one time quantum. OK part three. Now you notice this line is flat, it is not going up. That's because space goes this way. And so time is going forward; whereas, in their theories space keeps going down, down, down to the singularity and then at one Planck time ceases to exist. They got that much anyway right. Number three.

3. If there are about 10^{14} non-denials about 2100 agents out of all the 10^{23} agents are each conscious of one Planck time having past from that agents own private past to it's present time.

This time is fragmented. Now what I mean by fragmented is that they would be one agent in… agent arrow, agent arrow, agent but different individual each time. And so there would be about 2100 of them… of these…

B: Baby universes.

Y: Baby universes of A arrow, agent arrow, agent. And each one of them would have their own consciousness of one TP having past. But it would be a different consciousness, and it would be a different TP passing.

B: Yes.

Y: If all of these separate fragments of states of consciousness of time were summed, which they are actually not, the time would be about 1.2 times 10^{41} of a second.

And that's what I've done here. See 10^{-41} of a second.

B: These 2100? Or not?

Y: 2100 Planck times added together. All these fragments were added together. They're not because they are not connected.

B: We don't have face, but OK.

Y: So I just did that to have something to compare to their theories. But they don't know about fragmented time. They have come up with the idea of baby universes though. One over here, one over there. But they don't know where these bubbles are coming from.

B: Hawking has a book.

Y: OK.

> At this stage it is highly unlikely that any one agent would be the basis for more than two agents' states of consciousness of a proto fermion. So any agent would probably not appear as a proto fermion in different baby universes.

In other words, there wouldn't be any cross common connecting, probably not at this stage.

> Nor would the proto fermion have mass, energy, or located in space.

Now Number 4.

> 4. If about F3 or about 3.55784151 times 10^{15}.

And in calculating these values, we did take E into account in the F formula.

B: E this to M over N?

Y: Yes, we took that into account in figuring the times. I am not sure whether that's a good idea or not because I don't know which number is right. OK, in any case, the sometimes duration would be about 4.1 times 10^{-40} of a second. Here is minus 40th of a second and this is about half way through there, about here… that would be the sum of all the fragments. And one three-arrow arrangement could be expected that is either linear or bifurcated. Right at this point, you can expect one three-arrow; just below it there is a three-arrow example.

B: I have in my written, so this is F3 here, F3 here begins.

Y: Yes, F3 that's the one we're working on F3. And here is a three-arrow example, one, two, three. Now this has been preceded by the realization that both of them have to be at the same time. So this example is out of date in 1998 when this was written, so this wrong. So space needs a different three-arrow example, like that. Now we have a unit of space.

B: When connectivity curve has been obtained, this was done for non-directed graph, I believe.

Y: By Michael?

B: No, yes, by Michael but he is right because he has stated in his paper, "This probability for the incoming arrows for an individual and the probability for the outcoming arrows for an individual in this case F of 3…

Y: These are all outgoing, is that what you are saying?

B: The probability is the same.

Y: Yes, it is the same. These are all out and this is in, and these are out and but it is the same result. So the numbers are right, but this doesn't make space. So this is wrong. This is right. OK? I mean do you understand what I am saying now? Not whether it is right or wrong.

Bret: No. I don't know the difference between what you said was before and what…

Y: This arrow goes out from here A.

Bret: I don't have the papers is the problem.

Y: I gave you one.

Bret: I have this.

Y: No, I gave you one of *The Radical Theory*.

B: I have another copy of *The Radical Theory* right here.

Y: No, I gave him one. He just has to find it, but not now. Déjà vu. I just had a moment. I thought I had dreamed this experience of that discussion.

B: Really.

Y: Anyway, I haven't had déjà vu for a long time. Déjà vu all over again.

B: So do we have free will or not? Maybe we don't have.

Y: In any case three arrows in or out is three arrows, and they are calculated the same method. I am assuming that you understand those words in a sentence, right or wrong. OK, now where were we on three.

B: On four.

Y: On four, yes.

And example of a linear arrangement is A arrow, W arrow, [I] arrow, F which produces consciousness for A of two time quanta having passed, and consciousness for both agents A and W of one time quanta having passed from the time when [I•] dot existed to present in which F ● exists. An example is a bifurcated arrangement (is corrected) which produces for agent A consciousness of a bounded one dimensional space continuum of one length quanta extant. Or about 3.367144396 times 10^{-69} centimeters. What is that C for? I don't know? Anyway so this moves up, the amount of space that at least one of them is expected to have a pattern like this. But it could be like this and there would be no space.

B: It could also be like this.

Y: Yes, it could. So do that cut the probability down by a third?

B: He has done another chapter in probability to a fork structure, to appear and that transcends this problem.

Y: And therefore, this calculation of a number of an amount of time and an amount of space might be different because the probability would be decreased that it would be a bifurcated arrangement.

B: He has a chapter on the first fork structure to appear which is what we are searching for now. We are searching for this.

Don: That's here, that's at F (20?)

Y: That's not the first fork structure; that's the first (tri focal?).

B: This is in closed circuit, but this is open. This is this and this is different.

Don: I understand.

B: Frequency of forked structures and here where E comes into picture somehow. E of 2. These M's, for instance, M of 2 is square root of 2 factorial (N) to 1, M of 3 is third square root of 3 factorial (N) to square 2 . And he has here E 2 M over (N). These are applied any structures of two. So this one or this one or this one. For all of these, this is the same. This should be noted. And if we have structures of three, we might have this one or this one or this one.

Y: Page 27.

B: But when… You know, Yogeshwar.

Y: Yes, I went over this with Michael.

B: Yes.

Y: I ask him to do it. Then he showed it to me and explained to me what he did.

B: OK, because there is a difference between M of [I] in his article and E of [I]. When we have M of [I] and the formula for it is [I] square root of [I] factorial (N) Y minus one. Then when we have this one, for instance, M or 4 is 4 factorial…4 square root of 4 factorial and to third. Then this applies to both to outgoing arrows or incoming arrows or a line. They are aliened or they are forked, or they are like this.

Y: Or a combination.

B: This is why I mentioned this formula is for non-directed graphs. For non-directed graphs it is all the same if these are out going or in coming. But even more structures like this. This is connectedness for in-directed graphs.

Y: I see now.

B: But I should check once again with his papers. It requires time. He has another chapter for forked structures. And he introduces another type of probability which is E and this differs from M. And here, if we are introducing space into picture, we must deal with E and not M anymore because M might not give us space even though there are four arrows. So we might search now in order to introduce space for this type of probability when we have forked structures. And even this is not enough. This forked structure of four should be for directed graphs, shouldn't be like this because this structure assembles, is very like, it could be confused for a space even though it is not space if introduced as an in-directed graph.

Y: He told me they were not very different numerically; but they are different, so we are trying to do it right now. So to get the right one, so our probabilities can be checked against computer program setup where it is not a logical problem of having neglected this difference, I just ignored it because he told me they were very different. So the values were about the same. But if we are going to go a lot of decimal places, it should be right.

B: Then it should be right.

Y: OK. Then we'll read on.

> This fragment of 1D space

This is on the last line on page 27.

> This fragment of 1D space occurs in the sum time count at about 1.4 times… no 1.4 which is about…

B: The time estimated for the beginning.

Y: I am on page 28 now.

B: Do you not have it?

Bret: Count at about the time estimated.

Y: It says page 28.

B: Here.

Y: Estimated.

B: Yes, we should be here. The time estimated for the beginning.

Y: Beginning of quantum gravity. In the Guth/Steinhardt, that is misspelled. The u should be… It should be hard. *New Inflationary Theory Using a Grand Unified Theory*, state Guth 1984. I have that book. That's when he says that quantum gravity should begin. And I say no, I am making a prediction. It turns out to be about up here by about F7. Alright number 5 now.

> 5. When the sum time reaches about F4 at about 3.3 times 10^{17} time quantum distributed amongst many two-arrow and three-arrow baby universes which is about 3.9 times 10^{38} seconds. The first arrangement of four arrows would be expected to exist. One of the most likely ways these four arrows would be arranged would be to produce a two dimensional space of one length quantum squared or one square length quantum. This is about when GUTs or grand unification theories estimate the beginning of inflation.

So you would get four arrows… some combination makes this… that doesn't do it. I haven't given an example, and I haven't read this in twelve years.

Don: You have three going out and four going in.

B: We have arrangement of four, but F of 4 applies both to this arrangement of four, or this arrangement of four, or this arrangement of four, because F formula this M formula… M of 4.

Y: Or one like this.

B: Or this or many others.

Y: Yes.

B: Infinite number of others.

Y: But there would be one, I say. There is one that produces (space?) because this is…

B: Or it could be closed, yes.

Y: LQ on the side, that’s one LQ squared.

B: Yes.

Bret: Yes.

Y: This one.

Don: Yah, but that’s not more likely than the others.

B: And the others are all the same.

Y: No, but I said, it’s likely that one of these would show up as any of the others. That’s what I meant to say. And I don’t.

B: Yes, one of the most likely ways.

Y: One! Of the most likely ways is that one.

B: All of these are possible.

Y: That’s one of them.

B: This is one of them.

Y: OK, now, so Guth calls this here at the beginning of inflation. He gives this time here when this begins to turn up. But it is very gradual at first.

B: OK, so this is Guth.

Y: This is Guth.

B: Beginning of inflation.

Y: When the total, this is number 6 now.

> 6. When the total time reaches F5, about 5.3 times 10^{18} time quantum, this distributed amongst two, three, and four arrow arrangements which is about 6.2 times 10^{-37} of a second, one arrangement of five arrows would be expected with a good change of being formed so as to produce one unit of bound three dimensional space of a one cubic length quantum, not area but volume. At about this time, a few of the baby universes composed of two, three, and four arrow arrangements become cross connected.

For example, like this we got one two so and arrow comes connects them producing in the example a larger baby universe for X and creating a baby universe in the consciousness of V. I haven't described it. The idea is just to show that things start to accumulate. Number seven. You were worried about seven.

> 7. When there are F8 or about 3.8 times 10^{20} time quanta, for example, non-denials which is about 4.4 times 10^{-35} of a second the rate of cross connecting between two, three, and four, arrow arrangements increases and as a result the number of units of one, two and three dimensions of space begins to increase rapidly increasing the sizes, that is, the diameters, of the baby universes quickly.

I think diameters is… It's how much space is. So the number of units of one, two and three dimensional space are rapidly increasing. We had a discussion Bret about whether we are measuring diameter or whether we are trying add up. And my recent thinking of it is we are not trying to find the diameter, but just the total number of units of space.

Bret: Magnitude.

Y: Magnitude of one dimensional space even if it may have been formed in, along with two dimensional space and three dimensional space.

> Dimensional space began to increase rapidly increasing the sizes of the baby universes quickly. This is the start of inflation in the information model. This differs from the start of inflation in the GUTs models by about two and a half orders of magnitude. However, it is well within the GUTs model's margin of error, of about plus two and a half minus a half temporal orders of magnitude. The rate of expansion continues to increase rapidly up to about AF 27.
>
> That is until there exists one arrangement consisting of 27 arrows, in which one agent is the origin of all 27 arrows. This requires that at least 1.1 times 10^{23} time quanta exist. It's almost one non-denial per agent on average which is about 1.3 times 10^{-32} of a second. All of the length quanta, the LQ that are in the various baby universes.

The baby universes are fewer in number and much larger now.

> Total up to about 10^{-30} centimeters which can be thought of as the quote "diameter of the size of one universe" where the time space relationship between about 10^{-32} of a second and 10^{-31} of a second described in paragraph 8, 9, 10 see graph C.

You have graph C?

B: Yes.

Y: Alright. Put that on top then. Yes, you have that one, you have this one too.

> When just after F27, just after F27 which I think is right here, at about 0.9 time quanta, see foot note 4 or about 1.2 times 10^{23} time quanta which is about 1.4 times 10^{-32} of a second.

Would be about here. Ah, yes, there it is right there.

> A wonderful thing happens at this time. At least one circuit arrangement can be expected to exist. It would most likely consist of seven agents and seven arrows so that each agent is conscious of itself and six proto-fermions in an unbounded time continuum.

Now why is it not conscious of itself as a proto-fermion?

B: I wanted to ask you because he is not self conscious. He is not in a state of direct knowledge of himself but through the circuit.

Y: But he is self conscious and I'll tell you why. It's because each… he is conscious… has direct knowledge of every one of these individuals states indirectly. He is and therefore he is in a state of knowledge of himself, and each attribute in there is the same as himself. So he is conscious of himself. And it is an accurate consciousness but along with that consciousness… he is still in a state of no consciousness of himself. And so that dims or puts doubt because he says, but I am not conscious. I am not in a state of knowledge of myself, but I am in a state of knowledge of myself and I am conscious of myself and I think that is what I am. But I am not sure because I am also in a state of no knowledge of myself. So it is not enlightenment, but he is conscious of himself.

B: But as a physical thing.

Y: No, there is no physical because all four attributes in the state of knowledge of himself that's been past through all these individuals

B: Yes, yes, I understand.

Y: Includes the 'who'

B: Includes the 'who'. Only the 'who' is not the same.

Y: So. What?

B: About ‘who’ attribute.

Y: He is conscious of who he is.

B: By comparing to who this one is.

Y: No.

B: By the sameness.

Y: No, of the one who is in a state of knowledge of him. This one is connected to him. This is him right here. And this one here is in a state of knowledge of him.

B: But not of the ‘who’ I am.

Y: Yes, the state of knowledge includes all four.

B: I understand…

Y: The consciousness doesn’t include it.

B: Ah, the state of knowledge, yes, yes.

Y: All right. So all states of knowledge of all four attributes are included in his states of knowledge. And all four attributes, therefore, line up with all four of his attributes including who he is. So he is correctly in a state of consciousness of who he is except that he doubts that it is correct. And it is completely unstable. So this is useless for enlightenment’s sake. This is a discovery I made.

B: Yes, yes, it is great because yes are four attributes… the sameness but… the sameness is disturbed in a way for the ‘who’ attribute.

Y: Because he is still not accepting himself.

B: Yes

Y: I think Zimerod (former student) would be interested.

B: He will make something out of it. He will invent new technique.

Y: OK, where did we leave off? Do you remember anybody?

Bret: Then six proto-fermions and a unbounded time continuum.

Y: Where is that?

Bret: Third line down, half way across.

Y: Is this sum size.

Don: Yes.

Y: This sum size of the universe the total space produced in all the baby universes when this first circuit forms is about 5 times 10^{40} length quanta

This is here, ha, yes! See here the log length quanta? And there's 40 and it's just slightly more than that. For some reason, the line doesn't go through it.

Don: Where should it go through?

Y: I think it should go through the cross if the cross is in the right place. Oh, that's the plot of the core of the magnetic monopole. And this is where the graph shows it. Well, they are pretty close, closer than their calculations because their calculations have quite a margin for error about like that. OK.

> The sum size of the universe the total space produced which is about 2 times 10^{-28} centimeters. That's over here on this side extracted from the curve which compares to the Grand Unification estimate by Barrow in 1983 in his paper on magnetic monopoles, of a size of a core of magnetic monopoles of about 10^{-28} centimeters.

So you are right. You've got it right.

> It may be that this non-physical circuit is the actual monopole and that only the results of the monopole are manifested in the consciousness of the agents in the circuit as soon will be made clear.

So I am saying that this non-physical monopole is actually the monopole that they think is physical and that they can't find.

> As time moves from the forming of the first circuit to about 1.8 times 10^{-32} of a second, many more slightly larger circuits or monopoles are formed and some of these circuit merge into each other to form larger circuit monopoles.

Well, that's happening in this area here and that causes space to inflate faster. They have a thing that they think causes this which is a thing they call a Higgs Field. And a Higgs field rolling down the gradient of the Higgs field causes the inflation of the universe according to the Grand Unification Theory which is the field theory. But I say the field is really the individuals' making choices and adding more and more states of direct knowledge. Now, we go to number nine. Number nine covers this area here.

9. At about 1.56 times 10^{23} time quanta of non-denials which is about 1.8 times 10^{32} of a second an even greater wonder occurs. The first crossover circuit can be expected and the agents in it (that) are connecting to that arrangement consciously, experience a common unbounded one dimensional space time continuum. And it is unbounded because it is across the circuit.

The summed size of space is about 3 times 10^{43} length quanta. I got that number off this curve itself. Actually, in the original curve I drove it is smooth. But because when he made this out on a computer, he couldn't get a curve like that. (Matt?) I said OK, I'll take that. So this is at about 10^{-25}, three times 10 to the 23rd.

B: 10^{-25}

Y: That's this way, yes.

Bret: There is your original.

Y: There you go. Hey, you got an original off a mimeograph. OK, thank you.

> Which can be thought of as the size of the universe, and the size of a one dimensional monopole.

That'll give them something to think about, a one dimensional monopole. In that article by G t' Hooft, he has got a three dimensional monopole. There is a three dimensional monopole when we get to the third crossover.

> This is near the Grand Unification Theories estimated size of the X boson monopole of about 10^{-25} centimeters.

That's why I've got an X boson marked here since this is log-log it's not half way. It's a little more than half way.

> The coalescing of the baby universes most of which are now circuits that act like monopoles. So there's millions of monopoles now, maybe billions, continues at an even more rapid rate to form larger and larger but fewer baby universes.

They get less and less baby universes. They are infants, then they become teenagers.

B: Much more than the number of individuals now, we have now one 1.5 multiplied by $10^{23.}$ So now we have more non-denials than individuals.

Y: That's because we have so many arrows because we have crossovers.

B: In the connectivity curve this is stressed. If this is X I from I factorial and so on, over (N) factorial (N) to (N) minus 1, this is a special event like, in connectivity, here when N, this is X when (N) equals I, when X is I, X becomes 1. And now this is like… At this point the number of… At this point actually we have every individual connected to every other individual in a way.

Y: Indirectly.

B: Indirectly because the number of relations is the same as the number of individuals. And in order to have this event to happen, we might, we must have more relations than individuals.

Y: So we have.

B: We are here now.

Y: Yes. More than (N) the value of (N).

B: More than (N) yes. In the connectivity curve it was…

Y: And when it's pi over 2 which is 1.57(N) so you are at the inflection point which is right here. Pi over 2 is the inflection point. Pi over 2 is 1.57 that's half of pi (N). So each individual has about 1½ on average arrows and that takes you to the inflection point.

B: Yes, we here. Now boson appears when we have 1.57, 1.56 and the inflection point is at 1.57.

Y: Yes, which is not many more, huh. That is 1.57 times (N) which is about… This one is about 1.8 times 10^{-32} of a second, an even greater wonder occurs.

> The first crossover circuit can be expected and the agents in or connected to that arrangement consciously experience a common unbounded…

You can have a circuit and have someone connected like this and he will be conscious of it all just like the ones in the circuit. But he is a watcher, he is not a participant.

B: Maybe this is why Baker said, it is all the same if it is like this or like this.

Y: Yes, we call this hairs and this is a loner.

B: Loner, yes.

Y: Loner and this is a hair, hair this kind (touches his hair) because it sticks up.

B: To the head.

Y: It is just a name we use. So the sum size of space is about 3 times 10^{43} extracted from the curve. So I just took the curves value for this which is about 10^{-25} which can be thought of as the size of the universe and the size of the monopole,

B: Yes, I read all that.

> Then there's even more rapid rate… are these things forming but fewer baby universes exist. At about 1.9 times 10^{23} time quanta on average about 1.4 non-denials per agent which is about 2.2 times 10^{-32}.

So if you multiply 1.57 times 1.38, which is the value for N, you'll see that this value, this is 1.9 KQ. And what did you get? Oh you are doing something else.

B: No, you said.

Y: I'll do it. If we multiply 1.9 times 10^{23} times 1.57 we get 2.98. Am I doing that right?

Don: I don't understand.

Bret: What are you doing?

Y: How many agents? How many denials? 1.4. And I was… The point of inflection is 2.98 and this is 1.4. I shouldn't have multiplied by 10^{23} is all. I was just checking that we would be at this time and not at this time.

> The 1.49 non-denials per agent which is less than 1.57. That's the point that I am trying to make. Or about 2.2 times 10^{-32} of a second, the first circuit with a second crossover arrow is expected.

So all the other circuits won't get an arrow, but one of them does. They are expected anyway because this is all probabilistic stuff.

> Because the two crossover arrows, each agent in such a circuit is conscious of an unbounded two dimensional space, a 1D motion of fermions. A one dimensional motion of fermions along with weak electrical charges on the fermions and in addition, light and its electro magnetic force. Meaning not opposite of heavy, but light as in the room is full of light. There are no non-physical monopoles, there are no physical monopoles. It is getting late. i.e. no monopoles appear in the consciousness of an agent because the monopoles are non-physical crossed over circuit arrangements, they are only the produce physical results. Electric charge, for example, of those non-physical circuit monopoles in the agent's consciousness.

So a magnetic monopole puts a negative charge on every electron, and puts a positive charge on every positron. In fact, it makes it an electron and a positron. So I'm explaining how every individual in the circuit is given a charge. All you have to do is have one that has… one individual that has two arrows coming from it across the circuit and they all have electric charge. You don't have to wait for others to crossover this early.

> At this time the sum of existing space is about 6 times 10^{52} length quanta again extracted from the curve which is about 2 times 10^{-16} centimeters which is about here, yes, right there. This compares to the GUTs estimate of about 10^{-16} centimeters with a W plus and minus boson.

It's because of those I knew this value for the W boson because they know what the size of the shell around the core where the W boson is for the GUT theory. But when I calculated them or when Michael calculated them at my request… When the second crossover would occur it occurred at a place that fell on this curve that is the same as the size of shell of the W boson. And the W boson is responsible for the weak force which is responsible for radiation amongst a number of binding problems inside of a atom nucleus.

B: Great, may I say something?

Y: Yes.

B: Even though I have to study physical particles more but what I have seen, for instance, is that physicists say there are fermions and there are boson and the difference between them is in spin. Remember this morning when I mentioned to you, maybe… What does it mean when the second arrow appears? We have here one arrow actually and all these agents or non-physical individuals are same position actually. And we have one arrow, one crossover and we have the second crossover. And now we have difference in distance because the distance of this arrow is of the length of how many individuals are into it. For instance, if there are 30 individuals to make the circuit, then the distance is 30 length quanta. Isn't this so? We have now the distance of any individual to any other because they are in equal position and because the circuit is treated as one arrow actually. Because it is so, we could over cross or relate any individual to any other and the length will be 30 LQ is this so? Because I have seen this in your… I have seen this here and this is how I understood.

Y: Yes.

B: Is it so because...

Y: You're right as far as you go, but you are not taking a couple of other factors into account.

B: Now what I want to say I haven't yet come to the objective of my discussion. Now I have…

Y: Just said here it is 6 times 10^{52} LQ are involved.

B: OK, I am just giving an example to come to the point where radiation come into picture. This is my idea.

Y: Your principle is right; your numbers are wrong.

B: Yes, of course. This is just an example.

Y: OK.

B: So when we come to this point, of course, these are lots of them more than (N) we have already stated this, but just to be more clear. So we have here 30 LQ and now we have here another sub circuit of lesser length which is maybe 15 LQ.

Y: Maybe, as an example.

B: As an example, yes. This is more than (N). And we have also here a third circle and we have difference in wave lengths. And this is what creates radiation. Isn't it so?

Y: Correct.

B: Because I ask you and you say I don't know. It was outside the sessions this morning, but here you state this. To this I have come in the (benicqu?) of you. Or of physics, if it is correct, maybe it is not.

Y: I think it is correct.

B: Then great.

Y: But there is a lot to be said about it that goes with it.

B: OK, I am sure. But this is great, this is great. This is where somehow I pictured it without looking into this.

Y: Very good. It's a wave length, a frequency. You can take the wave length as your referent.

B: Or the frequency.

Y: Or the frequency.

B: It is the same.

Y: There are two approaches to this same thing, and you get a different outlook. And so in one case it is complimentary. We'll go into that later on and the details.

B: OK.

Y: Now we'll carry on.

B: Yes, yes.

Y: Great.

> This compares to the GUTs estimate of 10^{-16} centimeters for the W plus or minus boson sphere diameter of the monopole. Finally at about 2.06 times 10^{23} arrows, which is 2.4 times 10^{-32} of a second the first circuit that has a third crossover arrow and be expected. It produces in the consciousness of the agents and unbounded three dimensional space/time continuum in which there is a two dimensional motion, that is

curved, it is an acceleration in which the fermions have all the other fermion properties.

Spin, we have already talked about charge, now we are talking about acceleration which is related to mass. We'll go into that later.

The summed size of the universe at this time is about 6 times 10^{54} quantum lengths which is about 2.2 times 10^{-14} centimeters. This compares to the GUTs estimate of about 10^{-14} is all the closer they could get it for the monopole's zero boson sphere.

These W and Z bosons are different that photons. Photons are massless, these have mass, and because they have mass they are subject to changing there values, by changing the number of choices that we all are making and as a result they can fine tune the other charges. The values of the other charges that are otherwise fixed by the formula, the F formula. The ramifications of that are great.

The core an X, W and Z boson monopole are estimated by GUTs to appear one after the other at about 10^{-32} of a second.

And that is exactly the time realm that we have. This happening by assigning that one arrow is equal to one Planck time. So our numbers are right. I think they are righter than the GUTs calculations which depend on fourteen guesses at parameters and about five measured parameters that go into the Grand Unification Theory. And so they are just making educated guesses with wide bands as possible of error. Steinberg knows that too.

The increasing large baby universe monopole circuits continue to merge due to cross connections that occur as more and more non-denials are made by the non-physical agents. This goes on up through just after the point of inflation to just after that.

Point of inflation is at that X right there. Just after that. Just a few TQ less that 7 where am I lost. This goes on up through just after the point of inflection in the Information Paradigm inflation curve, just a few time quanta which are very short 10^{-44} of a second less than seven which is about 10^{-54} of a second.

The merging of these baby universes results in an increase in size of the space per time quanta. And a time quanta is different from a Planck time. It's 10^{-55} of a second. A time quanta is an imaginary time. Can I mark on this? We have this for time, that's F2 alright. F2 is the square root of 2(N). So you take a Planck time and divide it by the square root of 2(N) and you get 10^{-55} of a second. And that's the length of one… That's the imaginary time of one arrow. One arrow is not really time, it has to be… but it's as if it had a time. And this matches the imaginary time units that Hawking had in his seminal paper where he quantized the whole universe which is the best paper he ever wrote to this day. A man, I think I have got problems. Steven Hawking has got problems with the body. Where did I leave off?

> Of about sixteenth the total size be expected at the time this curve joins the standard big bang. And we are about to do that except we are going to stop for now.

Make a mark and finish the rest tomorrow morning. If you have any questions or things to talk, if the boys have any to ask you… they are chopping at the bit.

B: I am happy… At the beginning of our correspondence, you said the most difficult thing is to find new arrangements and the meaning to it.

Y: And to identify what physical…

B: To identify. I am happy because I feel somehow I have reached this point at least for this radiation because I predicted this is radiation, Yes.

Y: Ah you did one. Bravo.