#56S
Formal talk
Lila Recordings
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1 Hr 32 min
Recording 56

B: Find the ratio for two lambdas and the ratio will be fine. I've foreseen, maybe, I'm also wrong, but when you try to find one particular, then it shows not to be good.

Y: OK. I understand what you are saying now.

B: Yes. Maybe it's too early for such conclusion because, you know, whenever you have ratios, then it is fine. For instance, you have two hundred and six is the ratio between two particles.

Y: Yes, that's called an…

B: Yes, this is not correct. He has done the…

Y: …electron muon mass ratio. (B acknowledges.)

B: He has also here… Aha! Someone has corrected. (Tisk, tisk sound) You see, the same I was pointing to you that it should be 10 to the minus 10th and not 10 to the minus…

Y: That's my handwriting.

B: Ah, it's yours. So you have seen, actually, this. (Y acknowledges.) You have seen this. But here also somehow, you have…this is found differently. I have to redo it and to see how you find it. There is no, for instance – at least I haven't seen – for instance, just the mass, just the rest **[Recording time 2:12]** mass. But always it is in ratio, and it is correct which is great which proves that the underlying theory is still correct. But Wolfe might not be perfect. For now, I believe maybe the particle value for…

Y: All right. When you are satisfied with your work, you send it to me. (B acknowledges.) Then I'll respond.

B: OK.

Y: That would be very nice. Darshana, (Darshana acknowledges.) I'd better have a half. Anything else? You were…

B: Something about the idea I have mentioned to you last night.

Y: About the vectors.

B: To introduce, somehow, vectors, maybe…

Y: Punita, are you on? (Punita acknowledges.)

B: …if not for anything else maybe for understanding because at certain point maybe some elements of the Field Theory **[Recording time 3:46]** should be introduced more explicitly somehow and…

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Y: Well, that's an interesting idea.

B: For instance, in order to have a notion what mass is when we are looking just at the plane, we have just the projection of what is going on. Yes, we have difference in pathways; and this difference would be perceived in the consciousness of the referent Individual which is at the forked…which is at the location of the…when…where the bifurcation of two different pathways begins. In its consciousness, it perceives this difference in pathways as rest mass because it is somehow, as you mentioned at one point, it is this Margaret Thatcher affect. This is resistance to movement, somehow, because we have different pathway. But actually since this is a force, we introduced the force (Y acknowledges.) which is visible in your articles, that you introduced a boson as a carrier of a weak force. And it is different than the fermions which are particles. (Y acknowledges.) So this should be stressed even more if we introduce a vector theory, if we introduce vectors. Since we have elementary time unit, and we have elementary space unit, I believe at one point, it will be indivisible **[Recording time 5:42]** once we are introducing physicality into the picture, to introduce elementary force unit, or some, for instance, some elements of the Field Theory. **[Recording time 6:00]** I believe, although it will be like maybe gluing somehow and putting into picture elements from the existing modern physics, from the Field Theory and so on, still I believe it could be done just in terms of Lila. For instance, we have here, if we view this vector as divided into two which summarize give this one, then vector product which…is…constitutes a new vector perpendicular to the plane in which the difference of pathways is recognized and reduced in the consciousness of the referent Individual as mass, **[Recording time 6:50]** it could be presented as a vector which is orthogonal to the plane. And for instance, this graviton, if we perceive it…the smallest such arrangement which introduces difference in pathways is a triangle, and therefore a graviton. And it could be presented as a vector space.

Y: OK. Now before you go on, just a matter of terminology. When you say, 'to this plane,' you must mean that in a mathematical way because this is not a plane in the Lila Paradigm.

B: Yes, it is not a plane.

Y: So mathematically, you could call that a plane. (B acknowledges.) OK, as long as we understand how we're using the words. (B acknowledges.)

B: And for instance, once in this circuit… I mean the plane determined by circuit, actually…

Y: …which again is not a plane…

B: …which is not a plane...of course, it's not a plane.

Y: OK.

B: This is…actually, I am the one who always stresses it is not a plane by drawing it on a sphere always, you know. (Y acknowledges.) So it is my inner most understanding, it is not a plane. I never think of it as a plane. So always I draw it at least as a cylinder although it is not a cylinder for that matter. It is not in the background of time and space. But in order to improve…

Y: You're…giving…illustrating the relationship.

B: Yes, illustrating the relationship (Y acknowledges.) and making it easier. For instance, this notion of mine I have mentioned to you, that maybe when we have ratios, the results are

fitting to the tables done by measurements. But when we have particular value, either maybe the elementary time unit or something we introduced should be corrected or maybe introduce some other considerations.

Y: Well, as I said yesterday, when you're dealing with a circuit, the time unit is different than when you are in a fragment.

B: Yes.

Y: OK. Go on.

B: And my idea was when, for instance, one nonphysical Individual of the circuit originates itself into a state of direct knowledge of another nonphysical Individual in the circuit, now we have two circuits…two circuits…two illusionary movement around the circuits. It is all illusionary. And yes, as you stressed, it is not sine. It is not the sine as viewed as a projection of the movement of representative point around the circle that matters when we want to correlate to particle physics; but it is the difference in sines still which somehow produces radiation, on one hand. (Y acknowledges.) And, on the other hand, the perception of mass which is, actually, if somehow should be viewed, it should be observed as vectors. (Y acknowledges.) Also, once we introduce, for instance, elementary vectors into the picture, then we have…two others…several advantages. For instance, maybe the understanding will be easier; but also maybe the results should be improved.   If not…

Y: I get your idea.

B: Yes. And also, you know, I always picture it as a sphere, for instance. And then we might, at one moment, even introduce electric force and magnetic, magnetic which will be orthogonal to the electric because (Y acknowledges.) in Maxwell's Theory of electromagnetic fields, we have electromagnetic field processes energy and energy per unit volume, if volume is W is ½ epsilon e squared plus **[Recording time 12:04]** mu h squared, where we have e for the…is a vector representing the electric…

Y: And h is the magnetic.

B: And h is magnetic…and so, these two are two waves which are orthogonal. And if we present them as a vector, then we have S – where S is the arrow of the propagation of the electromagnetic wave – is e, a vector product with h, (Y acknowledges.) and the strength of electromagnetic force now which is e squared (e small) where e is the charge over h dash…
[Recording time 12:52]

Y: Over what?

B: Over h dash…

Y: h bar.

B: h bar which is a reduced Planck constant (Y acknowledges.) multiplied by c which is speed of light. And this is one over 137 which we use for K…

Y: Alpha.

B: The coupling constant, alpha. And h is 6.6. So in this manner, we could somehow introduce electromagnetic force, electromagnetic field, and so on. (Y acknowledges.) And

also, if we introduce vectors into picture, then our understanding of energy which I tried yesterday, maybe in bad wording, to explain somehow that topologically introducing the fourth dimension is topologically identical with introducing energy. And in terms of probability, the structure introducing energy into picture appears in illusionary time, so to speak; or when the state of affair is such that the number of arrows is the same as when we introduce energy into picture. This notion could be easily expressed if we have vectors. For instance, now I have here…this is the circuit…this is the circuit expressed in a sphere. So it is not a plane; no, not at all. It is not even a circuit. There is no background of space and time. But, we have here a referent Individual A and a forked structure. **[Recording time 15:00]** (Y acknowledges.) We have here one, two which in the consciousness of A is a perception of one dimensional space, (Y acknowledges.) and another one. So maybe it is not, maybe it should be done differently. But we have another one which creates this one. This one is...we have another bifurcation which introduces orthogonal one dimensional space. And both of them multiplied are presenting energy…

Y: Correct.

B: …which is topologically…as we have the fourth dimension because we have fourth crossover. And if we represent it, I have here. For instance, we have here in a sphere. We have a graviton which could be presented as a vector product. And what is vector product? I have written here some elementary relations of vector theory. For instance, a vector product or a cross product is vector A cross vector B is the fourth, **[Recording time 16:50]** or elementary vector unit, and then the module of A multiplied by the module of B and sine of the angle between them. So, a vector product actually produces a vector which is perpendicular or orthogonal to the plane in which the original vectors (Y acknowledges.) are presented. The direction of this vector is defined by this elementary unit of vector and sine of the angle between them. (Y acknowledges.) Or if…then symmetry does not apply for vector product. For instance, if we a have a vector product of I and B, it is minus B cross A; so, the sine changes. And this means that the vector will be down. But once we introduce this, we could do some comparison with particles and so on. For instance, the ratio (Y acknowledges.) you are searching, it could be presented by vectors. We could have one vector. For instance, we have a graviton here. Once we find the vector product of these two elementary vectors which are actually…this is of the circuit. These are nonphysical Individuals originating themselves into states of direct knowledges; and everything happens in the consciousness by comparison. But still, we have this picture. So we have here a vector which is normal to the graviton. And also, we have another graviton here, or maybe another particle, the configuration of another particle and different pathways and whose bifurcation produces comparison and is reduced into a unique perception of some particle. Then for this other graviton, for instance, we have another vector here. And they two, the two of them, could be, for instance, we could find the vector which is a result of them, a resulting force. And it is somehow fits into the picture because when we have a circuit and a common notion of illusionary space-time, then one of the Individuals originates itself into a state of direct knowledge of another one which is the crossover. And this all of a sudden creates different pathways which has a result or radiation or the difference in sine waves produces a new messenger of a force (Y acknowledges.) which is boson or photon. And at the same time, we have notion of mass because we have force now. This is illusionary; but still it could be seen as a force. And if we divide this force into its constituents, then we have, then we have…then somehow, we ourselves, as, so-to-say, observers of the picture, we transcend…

Y: We are what?

B: We transcend somehow (Y acknowledges.) the limitation of our perception as being embedded into space-time background because we go now into another dimension.

Y: I agree.

B: We breakthrough into another dimension. And this fits into the…

Y: This is good.

B: And here I have written some elementary…for instance, this picture could be also used, picture with vectors because every new vector, every new origination if seen as vector could be decomposed into its constituents which forms two different pathways and perception of the mass. (Y acknowledges.) But also, every…each next origination could be also decomposed into its constituents, and so on. And in this way could also the definition of consciousness could be seen easily. It could be illustrated that, for instance, when we have a sequence, A's in state of direct knowledge of B, B in state of direct knowledge of C, we say that, for instance, first if we start with B, that B's direct knowledge of C combined with B's consciousness of C as a particle when compared, constitutes an overall consciousness of B as a referent Individual of C as physical. And then, once we introduce B now into picture, A originating itself in state of direct knowledge of B, then we have accumulation of comparisons, first of A's direct knowledge of B combines with **[Recording time 23:42] A's** consciousness of B's consciousness of C as a particle, and so on. This could be seen when this is somehow spread out into a picture and these are presented as small vectors, for instance, because this is like the composition of the vectors. It should be considered, maybe, as a start. (Y acknowledges.)

Y: That would tie it into electromagnetic and also to the other forces. They're all basically the same really. I think there's only one force. And then the pattern changes slightly and you get a separation between the strong force and the electroweak force. And then it changes again through a recursion; and electroweak force splits into the electromagnetic force and the weak force. And then the electromagnetic force splits into the electric force and the magnetic force. As far as I know, that's as far as it goes. But I think this makes a good, not only a connection between the Lila Paradigm and forces, but listening to you, I could see it was clarifying for you about consciousness and the forces and space and time and energy. Those were all easier for you to see. That's what it sounded like when you were showing the different illustrations.

OK? I think you had better do that rather than me try to work it out. I have some familiarity with electromagnetic, but not a lot especially the mathematics that goes with it. (B acknowledges.) I don't know. I think that should also solve this question about the wavelengths.
B: This is why I start thinking of it because there is…this is how I start thinking of it. It's correct, yes?

Y: Did you see this?

B: Ah, not yet; but I see it's beautiful. (P and B laugh,)

Y: These are the reducible configurations or arrangements. And you notice where the number of arrows is two, the number of reducible arrangements is two. But when the number of arrows are three, the number of arrangements is four. (B acknowledges.) And for when the number of arrows is four, the number of arrangements is eight. (B acknowledges.) And then, five is sixteen. (B acknowledges.)

B: Yes. For five should be twenty-one. (Y and B laugh.) Remember when we were discussing…

Punita: Well, but this is a different counting. (B acknowledges.) This only counts threes.

B: Yes, not closed structures. (P acknowledges.) But you have also closed.

Punita: No. But no, in the consciousness of an Individual…

B: Ah, in the consciousness of an Individual.

Punita: You could look at it…this maximizes the number of Individuals that that referent one is conscious of.

B: But when you come to consciousness of mass which…this is beautiful! First I'm…it is so beautiful. (P acknowledges.) Really, I like it. It's great and will be included. This is beautiful. But now I was thinking in terms of consciousness, of rest mass, of mass.

Punita: That's why I started this because of the W. **[Recording time 28:46]**

B: Ah, you started it here.

Punita: Yes, because the doubling of the ratio and trying to see what might underlie that. Why do we have to double the heavier one to get it to come out? So I was just looking for something. I'm not sure how it fits in; but I was just looking for something that would relate to consciousness and the combinatorics, and relate to that doubling.

B: Yes, it's great. But I meant, for instance, for graviton, you have a closed structure. (P acknowledges.) So at one point, you should also include closed structures. But it's beautiful; it's beautiful!

Y: But there's no Individuals. (All laugh.)

Punita: I was just looking for something that might, mathematically and related to consciousness, underlie that reason why we have to double like we always say, "Why two?" "Why 2N?"

B: Yes, one is doubled, the other one…

Punita: Yes. And it entered into your calculation on the wavelength too, that you have to double. (B acknowledges.) And when you add one, you know, with one crossover, then it's suddenly doubling. (B acknowledges.) So I was just looking for some…

B: …underlying…

Punita: …yes, plausible…

B: …pattern.

Punita: **[Recording time 30:28]** because who knows if it has any…

B: It's beautiful.

Punita: In this, there's never a conflict between two pathways.

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B: Yes. These are all non-isomorphic.

Punita: Yes.

Y: They're what?

B: Non-isomorphic. There are no two of them which could be obtained one from another. (Y acknowledges.)

Punita: Yes. But because we have no arrow like this, or it doesn't go like here where it splits apart, it doesn't come back together. There's never a conflict between one pathway of knowing an Individual and another. There's always only one unique pathway to any Individual in these which is a much more primitive state than when we have alternate pathways.

Y: Alternate pathways, you open the door to energy (P acknowledges.) because you have attention.

Punita: Yes. But if you strip that out, we get this doubling. (Y acknowledges.) And the reason there's a dot there is because that's our referent Individual (B acknowledges.) who is conscious of all these things. (P and B laugh.)

B: It's beautiful.

Y: I want to stir up some more trouble now. *Radical Theory* page 27. This is where we left off. This is really… **[Recording time 32:54]** Go to page 28, paragraph 7.

So when they are F8 or about 3.8 times 10 to the 20th time quanta which is about 4 and ½ times 10 to the minus 35th of second, the rate of the cross connections between the 2, 3 and 4 arrow arrangements increases. And as a result, a number of units of one, two and three-dimensional space begin to increase rapidly increasing the sizes of diameters of the baby universes quickly. This is the start of inflation in the Lila Paradigm. This differs from the start of inflation of the Grand Unification Model by about 2 and ½ orders of magnitude. However, it is well within the Grand Unification Theory's Model margin of error of about plus 2 and ½ and minus ½ temporal order of magnitude especially since they're not considering that the constants of the speed of light and the nature of space and time are in for important changes at this realm at this time.

This whole section on this, I think, is important and needs to be developed more. The detail of…well, just like the very thing we were talking about with these arrows and how they cross connect and what affect that has on GUT's **[Recording time 35:42]** consciousness and include some more examples. The rate of expansion continues to increase rapidly up to about F27. That is until there exists at least one arrangement consisting of 27 arrows in which one agent is the origin of all 27 arrows. I think that last statement is not correct – is not complete.

Punita: Well, I think it is incorrect.

Y: 27 arrows of which one agent is either the direct or indirect…

Punita: Yes, there is a configuration of 27 arrows, yes.

Y: Well, I'm not sure of that statement you just made.

Punita: Well, that's what F27 indicates.

B: Yes, it could be different configurations like these…

Punita: Any one of those.

Y: Yes.

Punita: And more. (B acknowledges.) (B and P laugh.)

Y: That's why I modified it to say, 'as long as one of them is the origin.' Every one of these has got an origin. If it doesn't have an origin, you can't have a consciousness being affected. (P acknowledges.) So I modified it by saying that it's the origin; and it's connected either directly or indirectly.

Punita: Yes. I understand the statement now and I apologize. (Y acknowledges.) I misunderstood what that meant. This requires that at least 1.1 times 10 to the 23rd time quanta exists, almost one denial per agent.

Y: Well, I'm not sure of that statement; and I think it…that has to be reworked. All of the length quanta that are in the various baby universes… The baby universes are fewer in number and much larger now because they're starting to coalesce. And they total up to about 10 to the minus 30th centimeters. Now that figure was gotten by measuring it right off the curve. It was not calculated from an equation or a simulation. (B acknowledges.) It would have to be about that value. So when I say 'about,' I mean 'about.' And it's gotten from the curve itself. But that curve is pretty reliable because it's tied down by this point here which is calculated, pi over 2N, and also the curves from the GUT's theory. I'm basically following that outline and tying it in here. So, this has to be close to about 10 the minus 30th centimeters. However, 10 to the minus 30th centimeters is the diameter of a three-dimensional sphere at that point. And, at that point, we don't have three dimensions yet. (B acknowledges.) We only have one dimension. And so that takes the value of it down to about here.

B: A third, one third. Or, no? **[Recording time 40:05]**

Y: Well, it would be about one third on a log log scale. (B acknowledges.) So, it would be about in here. And then the whole curve ends about here because this is cubed; and this is just KN *lq* because you only have a one dimensional universe at that point. As soon as you get…

B: …recursion…

Y: …the next crossover, then you get a square universe. And then the next crossover, you get a cubed universe, a three dimensional. OK. Now all *that* needs to be clarified in the text. After all, we're telling the story of creation or creation in parenthesis, a creation of a consciousness experience, **[Recording time 41:12]** conscious experience. This can be thought of as the diameter or the size of one universe. For the time-space relationship between about 10 to the minus 32nd of a second and 10 the minus 31st of a second, see Graph C.

So, can you dig out your graph C? (B acknowledges.) You got that? (B acknowledges.) Just after F27 or about (point) .9N time quanta or at about 1.2 times 10 the 23rd time quanta which is about 1.4 times 10 to the minus 32nd of a second, a wonderful thing happens. Should it be wonderful or wondrous? It doesn't matter. And it is truly a wonderful thing. At that time, at

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least one circuit arrangement can be expected to exist. I sometimes think this story should be told backwards starting with three-dimensional space and then unrecursing it, working backwards, and then unrecurse it and go to two dimensions instead of three. And then tell that story of particles that are formed at that junction between those two, or the overlap between those two which is…starts with the nucleo-synthesis. That is where the nucleuses of the atoms are formed including the proton and then the neutron. And then they stick together in various ways and form the various nuclei which become the atoms that we're all use to. And just before that, in this middle or first recursion, the electromagnetic force and the weak force split from each other. And that's where we get the actual…at the time at which we get the actual W bosons and Z bosons. Now, they would be familiar with these particles. And then we unrecurse that and go the original pattern at the end of it; and then work backwards down the inflation curve, So…going from the familiar to the new gradually, step by step. But then I think, "Well, maybe they should hear the story of creation from the beginning of time."

B: Maybe both ways.

Y: Maybe both should be done.

P: Yes…

B: First for the beginning and then additional explanation to…shortly…

Y: Sort of a…

B: Recursion, (She laughs.) the last recursion of the story.

Y: It's a good…it's an interesting question.

B: You know… Remember how Hofstadter has written his book, *Gödel, Escher, Bach*. He begins with a conversation between the author, himself, and so on, the turtle from the story about Akilas and the Turtle. So there's a point in it. And then it goes – it has 700 pages – and then it ends with the notion that… the author says, "And now I'll tell you the story." And the book ends with the sign of expecting for a quote. **[Recording time 40:68**] So actually the book about self-reference is self referential itself. So maybe the story about recursions should be told by introducing the process of somehow recursion in order to actually…in order to scramble, to – what is the word? – to destroy their deeply rooted perception of background of space and time.

Y: That's their paradigm.

B: Ah?

Y: Their paradigm.

B: Their paradigm, yes. Then you tell the story from the beginning of the creation till now and then, shortly, from now backwards. And tell them, "Since there is no time background of time and space…" Somehow, to…the way of telling…of the way of relating to be mirroring the content of what is said, maybe.

Y: All right. I'll consider that seriously, tell it both ways. OK. I'll continue going front ways. At this time at least one circuit arrangement can be expected to exist. It would most likely consist of 7 agents and 7 arrows. So that, each agent is conscious of itself and 6 proto-fermions in an unbounded time continuum. The sum size of the universe, the total space

produced in all the baby universes when this first circuit forms, is about five times 10 to the 40th lq which is about two times 10 to the minus 28th centimeters. That's extracted from the curve again which compares to the GUT's **[Recording time 48:40]** estimate by Barrel of the size of the core of the magnetic monopole of about 10 to the minus 28 centimeters.

Maybe…I think I'll change all these centimeters to meters. In the last 10, 15 years, they have gone over (B acknowledges.) from the old method and using kilograms, meters and seconds.

It may be that this nonphysical 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. As time moves from the forming of the first circuit to about 1.8 times 10 to the minus 32nd of a second, many more slightly larger circuits or monopoles form and some merge into each other to form larger circuit monopoles. We want C. We're talking about 10 to the minus 1.8 which is about in here. It's just these baby universes are starting to merge.

Then we go to 9 at about 1 and ½ times 10 to the 23rd time quanta which is about 1.8 times 10 to the minus 32nd of a second and even greater wonder occurs. The first crossover circuit can be expected. And the agents in or connecting to that arrangement consciously experience a common unbounded one dimensional space-time continuum. **[Recorded time 61:17]**

Darshana talked me into using the term 'space-time continuum' rather than I wanted the 'space continuum' because she says it's doing both at the same time. But I don't think that's clear to the reader. So I think it should be developed more there that it's space and separately explain the time part. (B acknowledges.) And then show that you could call that space-time if you wanted to. (B acknowledges.) Also, I think that some of the things that have been said before, pages back, should be said again about the Individual being in that located as a view point in that unbounded space and what it's like and how that unbounded space is a different experience from the bounded space that had been talked about before. (P acknowledges.) The sum size of space is about 3 times 10 to the 43rd lq.

Well, that's in a three-dimensional phase. **[Recording time 52:52**] So if we wanted to get the…the radius though, this is the diameter of a three-dimensional space. And that diameter is of three-dimensional space. But the diameter itself is one dimensional. This is where I get confused. If the diameter is one dimensional, why isn't that the diameter or the size of the space at that time, rather than Kn? Whatever the value of n is, little n is at that point because little n will be less. But I don't think I'm getting my question across. A three-dimensional space that is Kn cubed would be Kn? Would be its diameter? If you had Kn cubed, the length quanta, (B acknowledges.) what would be its diameter?

B: I believe when we have discussing the size of the universe, we concluded – or maybe it was my perception and it was not accepted – that we should integrate the curve somehow. This means summarize all the situations up to the observed. So this, plus this, plus this…

Y: By Monte Carlo.

B: …plus this. By Monte Carlo or any other method. The size includes…it is like starting from the Big Bang; and we have a universe expanding – OK, in space-time background but still expanding. And it includes all that has happened up to that illusionary point of time.

Y: Yes. I understand that point. But that doesn't tell me what the diameter of a three-dimensional sphere is.

B: The formula is somehow four thirds R cubed.

Y: Yes. Yes, that's Euclidian space. (B acknowledges.) But if we're talking about in the consciousness of an observer (B acknowledges.) who is conscious only of one dimensional space, (B acknowledges.) what is the diameter…of… the equivalent diameter? How big is his unbounded space? Got my question then?

Punita: Yes and I…

Y: It's not Euclidian space.

B: Yes, I know. I am thinking about this.

Y: It's one dimensional; but it's unbounded. So it would be…it wouldn't be… It would just go to infinity if it's unbounded?

B: There's no diameter strictly speaking.

Y: There's no diameter.

Punita: I just don't think it applies. **[Recording time 57:04]**
B: Because it is one dimensional. It is one dimensional.

Y: But if it's two dimensional…

B: Maybe it should be…

Y: …it can be a circle, or, yes, (P acknowledges.) a plane, a circle. And that is unbounded. So when we're talking about a single crossover, it's really not unbounded space. So the text is wrong. I was talking with Seeley about this point; and he said it's unbounded and…

B: We are here; uh huh.

Punita: I think it is unbounded. And I think it's both unbounded into 1-D and unbounded into 2-D in the consciousness of the Individual.

Y: It's unbounded in the 1-D?

Punita: Yes, and later in the 2-D when it occurs. So I think the unbounded is correct. The concept of…

Y: It just doesn't have a size.

Punita: Well…

Y: Or it's infinite or zero. (Y laughs.) It's nonsense. (P acknowledges.)

Punita: Yes, but as I've expressed before my difficulty with this. I think it's like apples and oranges, you know. We're trying to map an unbounded space-time to people's concepts of Euclidian space.

Y: Euclidian three-dimensional space, that's flat.

B: The diameter is origination.

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Y: I wonder what our Topologist would say. What are you saying?

B: I say the diameter is the origination. (B and Y laugh.) One origination is the… **[Recording time 58:48]**

Y: OK. I can buy that. (B laughs.) Good. Well, that answers my question.

Punita: Can we elaborate that we're taking a God's eye point of view in summing the spaces, when, in fact, the spaces only exist in the consciousness of a referent Individual?

Y: Yes, it is a God's eye view. And the summing only occurs to give a figure that was connected to their calculations, not their measurements. (P acknowledges.) They certainly never measured any size (P laughs.) at this time or space.

Punita: Yes, I understand that. I'm just saying to make sure that it's clear that in the explanation that we are considering these two different perspectives.
Y: And, for any given nonphysical Individual, it is whatever it is that he determined by what arrangement he's connected to. (P acknowledges.) So, if he's in a small circuit or connected to a small circuit, he has…so we could give a range from zero to…probable range. (P acknowledges.) OK.

Punita: I just think to make it clear that, on the one hand, it's a purely conceptual construct; on the other hand, it's consciousness as it appears and the Individual is looking at it.

Y: And then say, "But if you, in principle, (P acknowledges.) summed them up…

Punita: Yes

Y: …it would be of the order that is given by Barrel in the Grand Unification Theory. (B acknowledges.)

Punita: Yes, and I think in their analytical point of view, that's what is occurring.

Y: Yes. OK. I'm imagining telling the story backwards, too. (P acknowledges.) So the X bosons **[Recording time 61:14]** are there also. (P acknowledges.) The coalescing of the baby universes, most of which are now circuits that act as monopoles, continues at an even a more rapid rate to form larger but fewer baby universes at about 2 times ten to the 23rd time quanta, an average of about 1.4 states of knowledge per agent, about 2..2 times 10 to the minus 32nd of a second. It would be about here on **[Recording time 62:06]** the curve. The first circuit with a second crossover arrow can be expected because of the two crossover arrows. Each agent in such a circuit is conscious of an unbounded 2-D space. I should probably say 'analogous to a'… a plate or a circular, a circle? Would it be a plate or a circle? And he will also be conscious of 1-D motion of fermions.

Punita: If you're considering the circle just to be the circumference, I would say it's a plate.

Y: Well, I asked a question. (P acknowledges.) Would it be a plate or a circle? (Y laughs.)

Punita: Yes. Well, I just said if you meant the circle as that area…

Y: I was hoping she would answer the question.

Punita: I'm sorry.

B: It should be drawn. It should be…

Y: Would it be a plate or a circle?

B: The notion of two dimensions.

Y: It's a two-dimensional unbounded space. It would be finite in size…

B: Yes, but still a…

Y: But would it be a circle? Would it be a plate?

B: Therefore, although it implies background of space and time, it should be drawn on a sphere, once again. For instance, I have here first crossover which forms, somehow, perception of 1-D and then orthogonal to it which will form both plate…both plate but on a circuit. It will be a – now once again introducing space-time, it will be like a manifold, a plate but lying on a circuit…on a sphere. And now the second crossover, the second crossover, the second crossover, like this one. And this and this are perpendicular…are orthogonal. And so we have here like a – of course, I'm aware we are introducing to a God eyes' view **[Recording time 65:10]** and background of space-time. But if you want to put it into words somehow…

Y: No. You're putting it into topology. And I'm asking, "What are they conscious of?"

B: Yes, yes, yes, I know.

Y: They're not going to be conscious of a sphere.

B: No, that is why…

Y: It is two dimensional.

B: Yes. It is neither a God's eye view nor…

Punita: …but the surface of the sphere.

Y: They'll be conscious of a…

Punita: That's why it's unbounded.

Y: Will they be conscious of the sphere? Or a part of the sphere? But they won't know that it's curved; or do they?

Punita: No, but…

B: Curved space-time.

Punita: Yes, but if you look at the sphere and just the surface of it, what makes it unbounded is that you keep going around, just like you keep going around a circuit.

Y: Yes, but you can do that with a circle or a plate. You can go around the plate.

Punita: But that's only a one direction on a circle – I mean, in a circle.

Y: No, you can go either way on a circle.

Punita: Well, but you go…the surface lets you go in an orthogonal direction which…the… going around a circuit on a circle doesn't. There is no orthogonal direction.

B: There's just one.

Punita: On the surface of the sphere, you've got that orthogonal second direction. In other words, I can go this way; and I can make a right turn and go that way. You can't do that on a circle.

Y: All right, but that's why I suggested a plate. On a plate it is two dimensional; you can run all over the plate. And there's no bound.

Punita: You run into the edge of the plate.

B: Yes. And on the surface of a sphere it is unbounded. When it is a plate, it is bounded although we introduce God's eye's view and space-time background.

Punita: No, I…

Y: If he experiences two-dimensional space in his consciousness, he can move in two dimensions. (P acknowledges.)

B: Yes, and never find the limits, the end of it.

Y: No, but it will have a finite size. (B acknowledges.)

Punita: That's the imaginary diameter of this sphere.

B: It could be…

Y: There's no sphere! He's not conscious of a sphere!

Punita: I agree. (P laughs.)

B: Yes, but then you should…but you are trying to put into words. You put *tq* and so on and so on. So it could be somehow stated.

Punita: He's not conscious of a sphere, just a surface that he can move on and move in orthogonal directions; and it never ends.

B: It never ends. You will go around the ball and never find the end; but still it is two dimensional.

Punita: It's like people thought the earth was flat because they could go this way and that way; and they never had a concept of the sphere. **[Recording time 68:30]**

B: It introduces topology, yes. But it is a way to explain to people. And then it should be stressed always. In every paragraph, you stress it. But we should not forget that we don't

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have neither God's eye view or background of space and time as we do in our conversations. Do the same for the reader to relate them the story.

Punita: Biljana, what about if you looked at the looking back at it is the God's eye view, looking from now looking back; (B acknowledges.) we have that point of view. And then looking at the point of view of it going forward is the consciousness of an Individual.

B: But there is no forwards and backwards.
Punita: No, I know. Just in order to present it to people (B acknowledges.) from this point of view. Looking back, it looks like this from the perspective of that Individual. At that point, it's this. (B acknowledges.)

Y: Well, I'll have to think about it more because I'm not convinced. I'm not convinced that I fully understood your point. And I'm not convinced you've fully understood mine.

B: I understood and I…

Y: It's like…it's like Feynman or Einstein (B acknowledges.) or Paul Davies being the particular observer. And that's the question that I'm asking.

B: Yes, I know. I understand more than I…

Y: And I'm not asking what can a mathematician imagine a situation in order to develop a mathematics. (B acknowledges.) But I'm saying the only reality is that of which someone is conscious of. And that's the only reality there is.

B: Yes, yes. I know. I'm fully aware of this. **[Recorded time 1:10:21]**

Y: I'll be back.

Punita: You know, to me an unbounded 2-D space says that--what the Individual is consciousness of. You know, it's a 2-D space that there's no boundary. **[Recorded time 1:10:41]**

B: Nothing of this would help. Yes, it's true. I am aware. But since…

Punita: How you could visualize that…there's two perspectives. Looking back at it – how we could visualize that and the perspective of the Individual itself. The Individual itself is unbounded just like people thought the earth was flat and you could just go and go and go and go and go; and you've got your unbounded 2-D space.

B: Yes, yes. And just the same, we perceive our world to be three dimensional. And we could go and never reach the end.

Punita: Yes, and that's unbounded.

B: But it's still forward and… Yes. Yes, I fully understand. Yes, this is maybe displaced, this discussion with surfaces and so on. Yes, it is displaced. I fully agree. But we should write something.

Punita: Well, I think to write…

B: Maybe not write anything. Who understands, understands; who doesn't… If you will

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mature enough, you will…

Punita: The two perspectives are…

B: …stressed, but it should be put into words. Our discussion (P acknowledges.) should be somehow made obvious to the reader. Either in terms: this is neither moving to a surface, nor this, nor that. It is just two dimension…it is just a consciousness of two dimensions.

(Y returns.)

B: You know, I'm fully aware of the…of the – what is the word? --of the… this picture not being adequate, of the non-adequacy of this picture or any discussions of that kind. I only wanted to stress that somehow our discussions should be at least with one sentence or half a sentence, somehow presented to the reader. Maybe, not in the sense as I suggested.   This is nor this, nor that. Maybe this is not a good way to negate. Maybe they are intelligent enough not to have false pictures into their mind. Maybe they do what… Maybe they just perceive which is right, which is unbounded two-dimensional space. For some of them, it is clear. But I thought that maybe these discussions should be clarified with maybe just half a sentence added here. Just to stress that this is not wandering around the surface of a sphere because it represents a referent…a frame of reference of some super being of God or something. It also introduces into picture background of space-time which does not exist (Y acknowledges.) maybe…because negation of the negation somehow stresses the point. It was said by many philosophers, *"Negation of negation is super position."*

So when you negate one perspective and discreate them…discreate this perspective in the mind of the reader, then represent another perspective and dis-create it in the mind of the reader, then all this dis-creations, somehow empty, drain the content of their prejudices in terms of space-time, God's eye view, and so on. Or maybe just stress it is just an unbounded two-dimensional space. Maybe they will understand. Why underestimate them? Maybe they… **[Recorded time 1:14:44]**

Y: Well, Wheeler, when he wrote his book on gravitation came across this similar problem in explaining gravitation, of how energy could just be conceived of as space. And so what he did in his book when he came to one of those points, he made a box over on this side and had a discussion here that is mentioned in the main text, but, so they can read right through without this box. But it's all there and gives all the other considerations.

B: Uh huh, yes, if they want to…if they want to look into the box.

Y: Yes. But this has come up several times – the importance of the difference between God's eye view and the Individual's observation. (P acknowledges.) And I think not enough has been made of that earlier. We're getting a book out of this. (B and P laugh.) **[Recorded time 1:15:58]**

B: It should be a book.

Punita: Just to me, the God's eye view is looking back.

Y: Yes, I heard you say that…

Punita: The Individual's eye view is going forward because the Individual's consciousness, they can't even conceive of a plate. They have no place to put a plate because they can't conceive of 3-D space.

B: But you remember what Niels Bohr said to Einstein, "Don't tell God what to do." (P laughs.) "Don't tell God what it is his eyes see."

Y: You're asking for trouble. (Laughs)

Punita: No, I'm just trying to put myself in the perspective of an Individual in 2-D space, and try to imagine that. I can't imagine is that a plate out there…it just, it goes on forever, you know? There's no place to put it in. (B acknowledges.) I don't know. I was just trying to imagine that perspective.

Y: Well, you think that size doesn't mean anything at that point?

Punita: I just…it's forever. It just goes on and on and on. I'm talking about the perspective of an Individual of unbounded 2-D space. It just, it goes on forever.

Y: An Individual in a circuit with two dimensions (P acknowledges.) of space. OK. Well, we've discussed it and…

Punita: Not an easy one. (All laugh.)

Y: I'll reflect more on it.

B: We should put ourselves into position of these minor beings and their limited perception.

Punita: Just remember what it was like.

B: Ah hah, yes. Just remember what it was like. (P laughs.)

Y: Well, they have that in psychology and philosophy. They talk about a sane person would understand this philosophical principle. Whereas, one that wasn't sane would understand it some other way. (B acknowledges.) So they have a split between those two. I'm suggesting a multi-level…maybe that's why some people just throw up their hands and say, "You can't explain it to those people." Like Kripalu says, "If they're happy being in prison… **[Recorded time 1:18:38]**

B: Uh huh. Let them.

Y: …let them be." (Y and P laugh.)

B: Accept them with their choices.

Punita: Why give them a key?

Y: All right. I'll try to go a little further now.   Because of the two crossover arrows, each agent in such a circuit is conscious of an unbounded two-dimensional space. That doesn't mean that he's conscious of all of it, but that it has unbounded characteristics. (Punita acknowledges.) The one…and one dimensional motion of fermions…   Motion in this paper was defined earlier. And if you put that explanation in a circuit, it works. I was looking at that yesterday. (Punita acknowledges.) We might have time for that tomorrow. And along with this, the weak electric charges on the fermions… So that you can get some W bosons and Z bosons, Z zeros, **[Recording time 1:19:49]** and in addition**,** light – the electromagnetic force. So he'll be conscious of light at that point. Before that, when he was conscious of just a

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fermion not located in space or time, most people when I describe that, they see this fermion, this bare fermion sphere. And it's lit up. In other words, it looks like it's white or grey or something like that. But that's not what such an Individual is conscious of. They're just conscious of the existence of some thing that is unitary. Well, we've said what it is over and over again. And so their minds imagine something when they read the words that doesn't match the actual experiences. But here, finally, they get light. So you could say that…in a way, that the Individual that makes that arrow across the circuit, the third arrow across the circuit, could be called Lucifer. (P acknowledges.) **[Recorded time 1:21:33]** And there is a mixed blessing. When you have light, you get more information. But also you get false information along with it. So you're cursed as well as blessed. And because it helps you with your imaginary reason for surviving, trying to survive, the light seems like a good thing to follow the light. This is reflected light. This is not pure consciousness light. And that's a whole another subject we can discuss separately.

There are no physical monopoles. That is, no monopoles appear in the consciousness of an agent. Not only that, they can't appear in the consciousness of any agent, including all scientists, no matter what equipment or apparatus they have, no matter how…if they build… Some of the scientists were talking about building an accelerator just outside the orbit of the earth around the sun. And build it all the way around. (P laughs.) Of course, this was a fantasy. In order to measure some of these things, that they can't get enough power in at CERN. But in principle, these are not physical monopoles. These are…the ones that I've talked about are nonphysical. And they will never find them in terms of measurements because the monopoles are nonphysical crossed-over circuit arrangements. There are only the produced physical results, electric charge, spin, etc. etc. of those nonphysical circuit monopoles in an agent's consciousness. So this nonphysical connections of relationship are responsible for most of these energetic states of the universe, motion, electric charge and all the other charges; but not gravity. **[Recorded time 1:24:12]**

At this time, the sum existing space is about 6 times 10 to the 52 *lq* – again, extracted from the curve – which is about 2 times 10 the minus 16th centimeter. That's about here on the curve. This compares with the GUT's estimate of 10 to the minus 16th for the W boson sphere of the monopole. Finally, at about 2 times 10 the 23rd non-denials which is 2.4 times 10 to the minus 32nd of a second, the first circuit that has a third crossover arrow can be expected. So, right there. It produces the consciousness of the agent of an unbounded three-dimensional space-time continuum.

The question is, at this point, that could be asked, is that space flat – Euclidian space? Does it have a positive curvature or a negative curvature like a hyper ball or a saddle? I think they call it, don't they? (P acknowledges.) …in which there's two-dimensional motion or a curve acceleration and in which the fermions have all the other fermion properties.

The recent measurements show that the current space is almost flat. It has just the slightest curve. …the latest measurements using the satellite that is measuring the cosmic background radiation.

Punita: WMAP

Y: WMAP, Wilkinson MAP

Punita: Microwave…something…Probe. **[Recording time 1:26:27]**

Y: At Lagrange 3 point. Also the latest measurement of that same instrument has determined that in order to fit the measurement, their theories had to be modified to show that the

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universe is finite (P laughs.) which the Lila Paradigm, of course, says. (Noise…that's quite a rattle you've got going there!) The sum size of the universe at this time is about 6 times 10 to the 24th *lq* which is about 2 times 10 to the minus 14th centimeter. This compares to the GUT's estimate of 10 to the minus 14th centimeter which is for the monopole of Zed zero boson sphere. The core, X, W-plus or minus, and Zed zero bosons in the monopole are estimated by the GUTs to appear one after the other at about 10 to the minus 32nd of a second which… This is 10 to the minus 32nd of a second; this is 10 to the minus 31st of a second. So it agrees with their calculated estimate.

The increasingly larger baby universe monopole circuits continue to merge due to cross connections that occur as more and more non-denials are made by the nonphysical agents. This goes on up to just after the point of inflection of the Information Paradigm Inflationary curve just a few time quanta, less than 7. And Michael says that it should be less than 8. How he got that I don't know which is about 10 to the minus 54th of a second anyway. Before this point, the merging of these baby universes results in an increase in the size of space for each arrow added of about $1/16^{th}$. Ah, that's where he got the 16th. That's where the 16 and 18 come **[Recording time 1:29:50]** …1/16th of the total size that would be expected at the time that this curve joins the standard Big Bang curve. It's just about…it's just a fraction of a fraction of a fraction of a second later that it joins it. OK. That's enough.

B: Thank you.

Y: So we run into good problems.

Punita: Yes, I think if we just present the sum time as the conceptual view looking back at it – that's in the consciousness of an Individual looking back at it; it looks like this in the consciousness of the Individual at the time. It looks like this.

Y: Well, Bret was saying it affects the probability. Now, I've thought about it 4 or 5 times since he said that and I can't see how it would. But I could be wrong because it is what it is. (P acknowledges.) It's not going backwards and it's not going front wards. It's the extant choices. And…but he says that the analysis would show that the probabilistic of the de-combining is different than the probabilistics of combining. Now, maybe he's right; I don't know. I'm not qualified to say. I don't know enough about probabilistics or I would have done all of this myself.

Punita: Well, a lot of times in graphing, **[Recording time 1:31:44]** they do experiment both by adding in and taking away (subtracting) arrows to get configurations. So I…that's known in Network Evolution Theory and could be easily looked at.

Y: Well, if she could verify her calculations that will settle it finally for me.

B: Do it both ways and pick.

Punita: Well, I don't have a problem with…

Y: Spoken like a professional.

B: Huh?

Y: Spoken like a professional. Check it both ways (B acknowledges.) and see. You have anything else?

B: No. Thank you.

Y: OK. Take a break.