Lila recording day 2, morning
22/10/2006
1 Hr 57 min
Tape 4

Y: Bodies about where you accept their choices, to have cordite in nuclear bombs.

Bret: That's why the ones that have gone before me don't do it… Anything about it.

Y: But that's all they want. If you accept them, then they won't do it anymore. That's a side effect. But if you intend to frustrate them, they'll just keep at it until you say OK, OK.
: 30
Bret: Yep.
: 49
Y: We still have a couple of minutes. It's 8:00 o'clock. This is my Chinese medicine. It is made out of about thirteen or fourteen different herbs.

Darshana: Twenty or so.

Y: Imported from China, developed after three thousand years of research.
1:16
Bret: Not a moment too soon. I started up *The Lord of Obstacle* last night and found all my code and projects.
1:33
Y: Oh, you still have it?

Bret: Yah, and the documentation. Oh, yah. I'm getting good at that sort of thing. You and I (Speaking to Biljana)...

B: Yes.

Bret: You and I will be learning here, time and space. You in the first time and me any changes, as well as getting familiar with it again. At the same time, I will be reading my documentation. In a little while, when we both notice, perhaps that it is time to look at the program and the algorithm.
2:05
B: OK. Yes, great.

Bret: One thing certainly has to be… the algorithms and implementation after have to be impeccable for this. If we publish it, it has to be correct.

B: Yes, yes. OK.

Bret: If you want to, no problem.

B: Oh yah. That is why I am here. It will be great.

Bret: No, you are here to do it yourself.

2:30
B: Yes. Just this morning I mentioned…

Y: That's my intention. She has her intention.

Bret: Ah, I see.

B: *Mia Culpa*. (Latin: my fault)

Y: I just want her to know it so well that she can keep Zegerod from changing it to something else.
3:00
B: Keep what?

Y: I want you to know the Lila Paradigm so well that you can keep Zegerod from changing it.

B: If he… Yes. He is ready to...

Bret: Something auspicious that happened…

Y: He says, "I want to create too." OK. He can create too.

Bret: Something auspicious that happened. I opened up a page of notes for things that you say, and questions and things.
3:30
B: (acknowledges)

Bret: And the handwriting recognition turned your name into brilliances.

B: Oh.

Bret: Maybe that is prophetic.

Y: Amongst other things, she is an expert in robotics.
3:45
B: In some aspects, it is too huge a field. This theory of Gödel is part of it, actually strictly speaking of artificial intelligence, because robotics also combines the movement of the robot; and this is a different field. Artificial intelligence in the logic is Gödel's theory and so on. But there is also the movement of the robot.
4:22
When I was in America, I was working on non-holonomic motion planning. These are non-holonomic nonlinear systems. This means the theorem for uniqueness and existence is not fulfilled. And this led me to thinking last night that in one of the basic attributes of the non-physical individual of existence, unity, 'whoness, ability to act, that unity and existence are also to be recognized in mathematics as very important attributes.
5:04
For instance, for each theorem you have to prove, for each system you solve, you have to prove the existence and the uniqueness of the solution. Otherwise, the

system is of no use to you. So in order for something to be considered scientifically correct, it has to be proved in regard to uniqueness and existence. And this is what the attributes, unity and existence are. So this is very, very good. This is one point, maybe.
5:44
Y: It is interesting.

B: To be expressed somewhere.

Y: That also applies to a non-physical individual, of yourself. You can check it first person.
6:00
B: (acknowledges) Existence and uniqueness.

Y: Yes. Your own unity is at… If you think, "Well, the hand is separate from me." "Well," then I say, "That can't be you because it is separable. But if you can't separate it from you then it is you."
6:23
B: Yes, yes. OK, great.

Bret: Both of us agree.

B: Yes.

Y: OK, let's go.

B: OK.
(Starts formal session)
6:30
Y: Today we are going to do a hard thing. Yesterday was actually harder, but I don't think we have realized it yet that the formation of consciousness, the illusion of consciousness, is the background we need in order to understand time. And we are going to do this as a combination: study the words and a workshop. We'll do a little workshop, or big one about making our own drawing of what time is.
7:21
But first we read *Attributes of the Individuals*. No, that's not it.

Don: Page 15.

Y: Which?

Don: Page 15 at the bottom, *Consciousness of a Proto-Physical-Particle*.

Y: I have page 12. Why is that? Ah, you're right.
(Bottom of page 15 *The Lila Paradigm of Ultimate Reality*)
8:06

Consciousness of a Proto-Physical-Particle Located in Time

And yesterday we developed consciousness of a proto-physical-particle. 'Proto' is used because in science, they wouldn't recognize it because it is stripped of everything but its existence. So, one is just conscious of an existing thing, not an individual. It is an individual. But A is conscious of B as an existing thing, not anywhere. It's not located in time or in space. And it doesn't have spin or anything like that, of course, or mass. OK, now:

9:06

> Let an arrow [→] represent an act by the nonphysical individual at the tail of the arrow to originates itself into state of direct knowledge based on the non-physical individual at the head of the arrow and let a capital letter represent the non-physical individual: so we have A → B = Individual A in a state of direct knowledge of Individual B. As described just above,

9:44

when we were working on it yesterday:

> Individual A is *conscious* of Individual B as a proto-physical-particle, not located in time or space and without charge, motion, spin, or mass. Let a dot (•) represent Individual A's consciousness of such a proto-physical-particle based on, in this case, Individual B:

10:25

So it comes out to be A → B•. So the dot is the proto-physical-particle in A's state of consciousness. You have to remember that it always in A's state of consciousness. But it is based on B. That's why the letter B is there. So it is really, that he is conscious of an illusion because B is not a proto-physical-particle. B is a non-physical individual; but it is based on B.

11:00

> Let the absence of an arrow from Individual B to Individual A represent a state of Individual B of no direct knowledge of Individual A. And for the sake of completeness, the absence of an arrow from Individual A to itself and the absence of an arrow from Individual B to itself represent states of Individual B and Individual A of no direct knowledge of Individual B and Individual A of themselves respectively.

11:33

Now why do I reverse those? Because I am dyslectic. I am. I couldn't read until I was fourteen years old. And I had to teach myself. So I see something. I see a sentence as a whole. To me, it's all the same; it doesn't matter whether it's this way or that way. Where guys like this are linear, and I'm holistic. You need both.

12:19

> (Top of page 16 *The Lila Paradigm of Ultimate Reality*)
> To locate a proto-physical-particle based on Individual B that is [B•] in an appearance of time in the consciousness of Individual A, an addition is needed to the arrangement A → B•, as in the arrangement:
>
> A → B• →C

12:44

> Because Individual B is in a state of direct knowledge of Individual C, and because, as mentioned in the last paragraph under Attributes, **Rule One** indicates that Individual A's state of direct knowledge of Individual B *includes* Individual B's state of direct knowledge of Individual C; and therefore, Individual A is conscious of two proto-physical-particles B• and C• as in:

A → B• →C•

13:37
There is a lot in that word 'therefore.' You can just accept it because the rule says so. Then OK. But…
Do you want to go back to the rule?

B: No, no.

Y: It's quite a ways back. If you want, it's there under attributes. Is that it there? No.

Don: Page 7.
14:11
Y: Yes that's the rule. That was on the recommendation of a Professor at the University of New England in Australia, a philosopher, who I was trying to explain why that this rule is so. And he couldn't understand it. I couldn't get him to understand it. So he said, "OK. We'll just call it a rule rather than a reason."

But I am going to try to get across the reason for both rules here.
14:56

> From **Rule One**, Individual A is in two states of *consciousness*:
> (1) the consciousness of two proto-physical-particles due to A → B• →C• and also,
> (2) the consciousness of one proto-physical-particle due to A → B•.

15:20
So this A is in two states of consciousness: two proto-physical-particles and one proto-physical-particle which is a substate of the first two. Now, you nod your head. If you have understood it that quickly, and you may have, I don't see why other people don't understand it. They don't understand what a substate is. So I made a rule.
15:59

> There is another rule, **Rule Two;**
>
> Any two or more states of consciousness a single non-physical individual is in, are subsumed (or combined) to form a single state of consciousness that includes those states of consciousness.

16:17
So to get A → B• to be a substate of A → B• →C•, I just say that the rule says that that's the case. So are you going to trust my rule? Or do you see that it is a substate?

B: It is a substate. But maybe there is more to be seen. For now, I see, yes. It is a subset like this one. This is a subset.
16:40
Y: Yah. Right. It's embedded.

B: Yes, yes.
16:56
Y: So A → B• is embedded in the overall arrangement. That is what I said. It is called a substate of consciousness of the overall state of consciousness. So then, we go on. We just read because it is subsumed. Why is it subsumed?

(Bottom of page 16 *The Lila Paradigm of Ultimate Reality*)

This is because of the unity attribute.

17:32

Because the individual is a unity, so is the substate that produces the state of consciousness of B• for A, and the overall one that he is conscious of. In that, two proto fermions are united into a single state of conscious. But, of course, it looks like there is a conflict here because he is conscious of two different things, two different situations. So there is a resolution to this situation.

18:05

Therefore, as a result of Individual A being a unity, these two *conscious* states that Individual A is in are 'subsumed' into a single conscious state.

So if that is true, you don't need the rule. That just says why it happens.

18:23

In this example of A → B• →C•, the subsumption results in Individual A's consciousness due to the substate A → B• being embedded in Individual A's overall consciousness due to A → B• →C•. The reader might think that Individual A is in a conflict with the two 'consciousnesses':

18:59

The substate of one consciousness, on the one hand,

(Top of page 17 *The Lila Paradigm of Ultimate Reality*)

one proto-physical-particle and the overall state of two proto-physical particles; however, this conflict is resolved if the reader understands that

19:23

Individual A is in a single state of consciousness of what is usually called 'present time' in which there appears in Individual A's consciousness one proto-physical particle, C•, along with a conscious *memory* of one proto-physical particle B• due to this consciousness being an embedded substate in the overall present time.

19:57

Now does that follow logically for you? (Speaking to Biljana)

B: Yes, it does. Only when you are talking about this global or overall consciousness, does it include just this A → B• and A → B• →C•? Or does it also include this and this, and these two together? Are there three ingredients, so to say, or just two? Is this just the first one, this the second one, and the third, a combination or subsumption?

20:47

Y: There is a combination.

B: Or just the combination is the overall consciousness? Or the combination of this, this, and these two together?

20:57

Y: The last. What you just said. This one.

B: This is the first one; this is the second; and the third one should be A → B• and A → B• →C•.

21:18

Y: Well, I am not, I can't say… I think there is something missing in our notation, at least in mine. In order to indicate memory in that situation, we experience as the memory of B• having existed alone by itself; and also we have a consciousness in

the memory that it is in present time, of one B• by itself and overall, there is that memory and the consciousness of both of them, of both B• and C•.
22:15
So we call that situation memory. This is the definition of memory. Now having the definition of memory, we say, "Well, that's time."

So memory is just a… makes the illusion of time. There is no past actual moment. In fact, there is no present moment either; it's all illusion.
22:49
So, I am not sure to say, 'yes' or 'no,' which it should be here. I want your advice because I am not familiar with the notation systems.
23:15
Yes, we'll get to that. (Speaking to some other person in the room.)
If you can't answer immediately, we have another project we need to do. We need a diagram.

B: Ah ha.
23:26
Y: And I just wanted to make sure that this is the right place. I think we should read a little more.

> (Top of page 17 *The Lila Paradigm of Ultimate Reality*)
> That single state of consciousness Individual A is in also includes the conscious memory of a B• proto-particle having existed one fundamental unit of duration (time) in the past from Individual A's overall consciousness of the C• proto-physical particle existing in present time.

24:06
So it is also included.

> Individual A is in a state of consciousness of an apparent *continuum* of time of one unit duration. The continuum appears in Individual A's consciousness again because the two conscious experiences that Individual A is in are subsumed into one conscious experience due to the unitary nature of Individual A.

24:42
This is where the concept of *continuum* comes from. It follows the reality of discreteness of the individual. That's the fundamental discreteness. Now we string a unit of time out between the moment of… discrete moment of time, one unit in the past and the present discrete moment. There is a continuum in the consciousness of A that is created as if durating through that time or passing through a continuum of time. Now, that's a lot. If this is correct, everything else follows.
25:33
B: May I ask just one question?

Y: You can ask.

B: If the situation is the opposite, for instance, A was conscious of B• conscious of C• and by its own choice because it has the ability to choose, it has chosen… I don't say later because time is an illusion; but the second situation is A → B•. Now, this is also… Now C is in the memory of A. You know it is easier to understand to go from A → B• to A → B• →C•. But if the situation is the other way around because A has

the ability to choose, he might choose not to be in state of direct knowledge of C. I won't say later on because it includes time.

Y: Alright. This is a… Yes. But…

B: Then.

Y: But you can't have an order that there isn't…
26:49
B: No. It implies time. This is why I say, "It implies time." This is why I don't say later. I do not say later. But if…

Y: But you are saying there is a sequence, that there is this sequence; and there is this sequence.

B: Yes, yes.

Y: And there is not.

B: I understand, I understand.

Y: There is only the appearance of one.
27:10
B: Yes, I know, I understand. Sequence implies time. But I was thinking also in terms of the matrix presentation. If the other way around is also possible, no matter how you name it, maybe not sequence, maybe we should find another word which does not imply time. But it should be a situation like this one because the freedom of choice allows this situation to happen. I might have the situation…
27:48
Y: Any… but they can't… They don't both exist. That's a timeless statement. They don't both exist. It's either one way or the other way. But as a substate, they can exist in a way both at a… Both can exist, one being the substate of the overall state.

B: But also it could be that A → B• →C• is a subset of A → B•. Isn't this possible?

Y: No.

B: No?
28:33
Y: Otherwise, Feynman would be right; and time can go backwards. And time doesn't go backwards.

B: Maybe, but ah…

Y: The illusion of time. Time has… this is time's arrow right there. You have just shown it.

B: OK. Then it is simpler. Maybe, I complicated it unnecessarily.

Y: Yes. This resolves it. Paul Davis wrote a whole book called *The Arrow of Time*.

29:10
B: I have read this book by Paul Davis. The name is *It's about Time* meaning both. It is a book about time, describing time and meaning at the same time. It's about time to say something. So the title is *It's about Time*. I have read it. Just yesterday I have drawn you… you don't remember. It was from this book. Something Paul Davis… something Feynman said about time going backwards.

Y: Yes.
29:51
B: It is, even in science, it is possible in Feynman's diagrams. Maybe this is why I ask you this.

Y: Yes, it is; and it is… I have been over all the…

B: May I draw it? May I show you? It is from the book *About Time* by Paul Davis.

Y: I have read it too. I have read them all. I have read all of Feynman's stuff too. So we can save it if you will just look at what I am saying. Now, if you want, you can take it as a rule. Or you can understand my reasoning.
30:32
B: No, I want to understand the reasoning, of course.

Y: That... anybody can see that this is not a substate of that.

B: I can see also. But what about the freedom of choice of the non-physical individual?

Y: Exactly.

B: I might choose.
30:40
Y: You might. But might is a might. What we actually choose is what we actually are choosing. And that's it. There is no time. It is just whatever we choose. It's not a matter of changing it. You don't change it from this to that. It is just an absolute.

B: State of affairs.

Y: Yes. It's absolute ability to do so. You're smart.
31:18
B: During evolution, is it not possible for the overall consciousness of the universe as a whole, for instance, to be diminished once I have chosen as a non-physical individual to be in state of direct knowledge of another individual? But then because I have ability, I know then implies time. But still I might phrase somehow the question; and then I decide not to be in state of direct knowledge.

Y: You said, "And then."

B: I said, "Then." And this is…
32:00

Y: No, I would say you just decide to be in a state of no knowledge. Then you will be in a state of consciousness. That's different than the one before. But you don't. There is no difference because the other one doesn't exist.

B: And I don't have memory in time.

Y: No. Zero time.

B: So this is…

23:28

Y: The memory is all a projection of the actuality, the extant arrangement. And that gives an artificial as if there was a time, a past going on here. And it gives you a possibility for a future. But if you make an arrangement that we say is different, but that implies changing it from the previous one… if there is an arrangement that does it differently, then you have a different past and a different future. This is the Lila Paradigm at work. So we can go ahead. But as long as you understand it, not necessarily agree, that's fine. But we'll come back to this over and over again because it is profound. So if we could read.

33:50

(Middle of page 17 *The Lila Paradigm of Ultimate Reality*)

> The durating continuum of time for Individual A in this particular example is *bounded* by the conscious memory of one proto-physical-particle, B• one unit of time in the past, which is the beginning of time for Individual A and by the conscious experience of proto-particle C• in present time, which is the end of time for Individual A. Remember there is no background of time, the background in this case is the non-physical individual and their originated states, which is all that exists.

34:39

The consciousness is an illusion. So we're trying to describe an illusion. There are some wording problems in here. But the general idea is there. I am going to read on.

35:00

> This subsumption and embedding into a single state of consciousness *compares* the consciousness that Individual A is in of present time to A's consciousness of one unit of time in the past (in Individual A's memory). This comparison is a *measurement*.

35:25

So, this is what in quantum theory a measurement is. This comparison and in Sanskrit it is called that thing… the mechanism in the mind that does this is called the *buddhi*, the judgement, measurement, the comparison. It is the comparer. When you measure something, I just happen to have a stick here, when you measure something, I compare this to this.

35:58

That comparison makes the measurement. But that comparison is not here. It is due to the observation. The consciousness of the two compared to each other makes the measurement. And so it's the memory of B• compared to the situation in present time, the overall situation… Those two consciousnesses are subsumed into a single state which is the comparison activity due to the unity of the consciousness of the mind of the individual, which is due to the unitarian nature of individual.

36:45

So this comparison is a measurement.

> A measurement of Individual A's consciousness of present time of C• to Individual A's consciousness of B• and of one unit of time duration to zero units of time duration.

I am trying to explain the whole business of measurement there.

> Individual A is an observer in whose state the comparison non-physically and thus 'instantaneously' occurs,

37:31

But it is actually on time.

> which is the measurement. This is the basis of the reduction process or collapse of the wave function in quantum theory.

37:45

Now, I wanted to explain this to Henry Stapp on the Sunday afternoon I spent with him listening to his wife sing so beautifully in the next room. But he wanted to know about motion. And I wanted to explain to him about time. And I couldn't explain motion without explaining this first. I couldn't do it; and I couldn't get him to do it. So I listened to his wife. That was a great disappointment to me because I felt that we could do that. But it didn't happen.

38:30

B: May I say something about the reduction of the wave function?

Y: Yes.

B: Actually this explanation is very similar to Roger Penrose's explanation in both his books *Shadows of the Mind* and *A Dangerous New Mind.*

38:42

Y: It is. He does it on the basis of gravity which is just one step too far to get it right. The thing that makes gravity… That is a graviton. It's different than this. But the principle is similar. And he almost got it right. We have the tension between the two situations here. This one says, "It's here;" and this one says, "It's here." And that tension between the two is the gravitational force. It has to be part of an overall circuit though. And that is what he said; and he got it so close that he can taste it. And he is so frustrated, the poor guy. I had Darshana (Catherine) go to Oxford and try to find his office and give him this paper. And she couldn't do it.

Darshana: He was in Australia.

40:08

Y: He was in Australia. So she went to David Deutsch instead. Then six months later, he comes out with a new book that stole some of my ideas. I have it right over here, *The Fabric of Reality*. But he only got a little bit of my stuff.

40:27

B: I have heard. I had in mind by Penrose the way he explains the *Einstein, Podolsky, Rosen Experiment*. He says, "This is as if you have two balls, one black one white. And one of your friends has taken the blue (black) balls and has flown away to Paris, for instance. And now, you open your box and you see that your ball is white. At this very instant, at that very moment, although there is no time for the information to go from the white balls to the black balls, you know, you know…"

Y: You know. You don't see; but you know.
41:20
B: You know. Yes, I know. I connect this to consciousness; you become conscious that the other ball is black one instantaneously. And this resolves the *Einstein, Podolsky, and Rosen Experiment*. In a way, it is a problem of consciousness. The collapse of the wave function happens at that very moment. At that moment, you know that in London is the black ball although the theory of relativity and the limitation of the speed of light doesn't allow the signal to go from the white to the black ball.
41:56
Y: It doesn't pass to it on the local basis.

B: Yes. It doesn't pass to it on the local basis.

Y: But it tells you that reality has something to do with just the knowledge of it.

B: Yes.

Y: And that is what this is. It's the Lila Paradigm. It is really an epistemological theory. So you understood that. So am I lost again? Are we on page 18?
42:34
Bret: *Consciousness of a Simple Physical Particle*.

Y: We're on which page.

B: Seventeen, at the end of seventeen page, the collapse of the wave function.

Y: Uh ha.

Don: We just finished that.

B: Now we go to eighteen.

Don: Page eighteen 2.3.

Y: Ah ha,

42:51

(Top of page 18 *The Lila Paradigm of Ultimate Reality*)

2.3 Consciousness of a Simple Physical Particle Located in Time.

What is this, a different version of the same explanation?

Bret: An earlier one?

Y: Well, it's a different one. I am not sure of the time.

Bret: In the evolution of the paper, I mean.
43:22

Y: Ok, I am going to do something else instead. I am going to get the white board and give this to (Meeka?)… A graph of it.

Don: You can start the original time if you want it.

44:00

Y: OK. We need A… Individual A. Now we have Individual A who is in a state of direct knowledge of Individual B. So we have here A → B. But A is in a state of direct knowledge of it. So we have to show that through direct knowledge realm. We'll call this A's state of knowledge of B. Now, because of **Rule One,** we can deal with C. But B… How did this C get in Individual A's…?

45:51

Rule One says that whatever state B is in is included for Individual A. So included is B's state of C, the state of knowledge, that goes without saying. Now, we have the… This is the 'who,' and then the other three attributes. We have the 'who'… who he is (who A is); and we have the existence, the unity, and the ability to act.

47:16

I thought about that overnight. And I am happy with the ability to act. However, if you… There are two meanings for the word acts. It could be as a noun, meaning that the individual acts; or it could be as a verb, as the action itself. So it could be misunderstood. So saying… if it's taken as a noun, it means the same thing as the ability to act. But if it's a verb, then it's misunderstood. And it means the acts themselves. So I am happy with ability to act as an attribute. And then we need who C is, and then…

B: This is inside C. Is this so?

48:34

Y: Oh, you're right. I did it again. I think diagrammatically. That is all that is necessary. But this is a drawing or a picture of states of direct knowledge and indirect knowledge. The consciousness is a… well, I'll just read this.

49:31

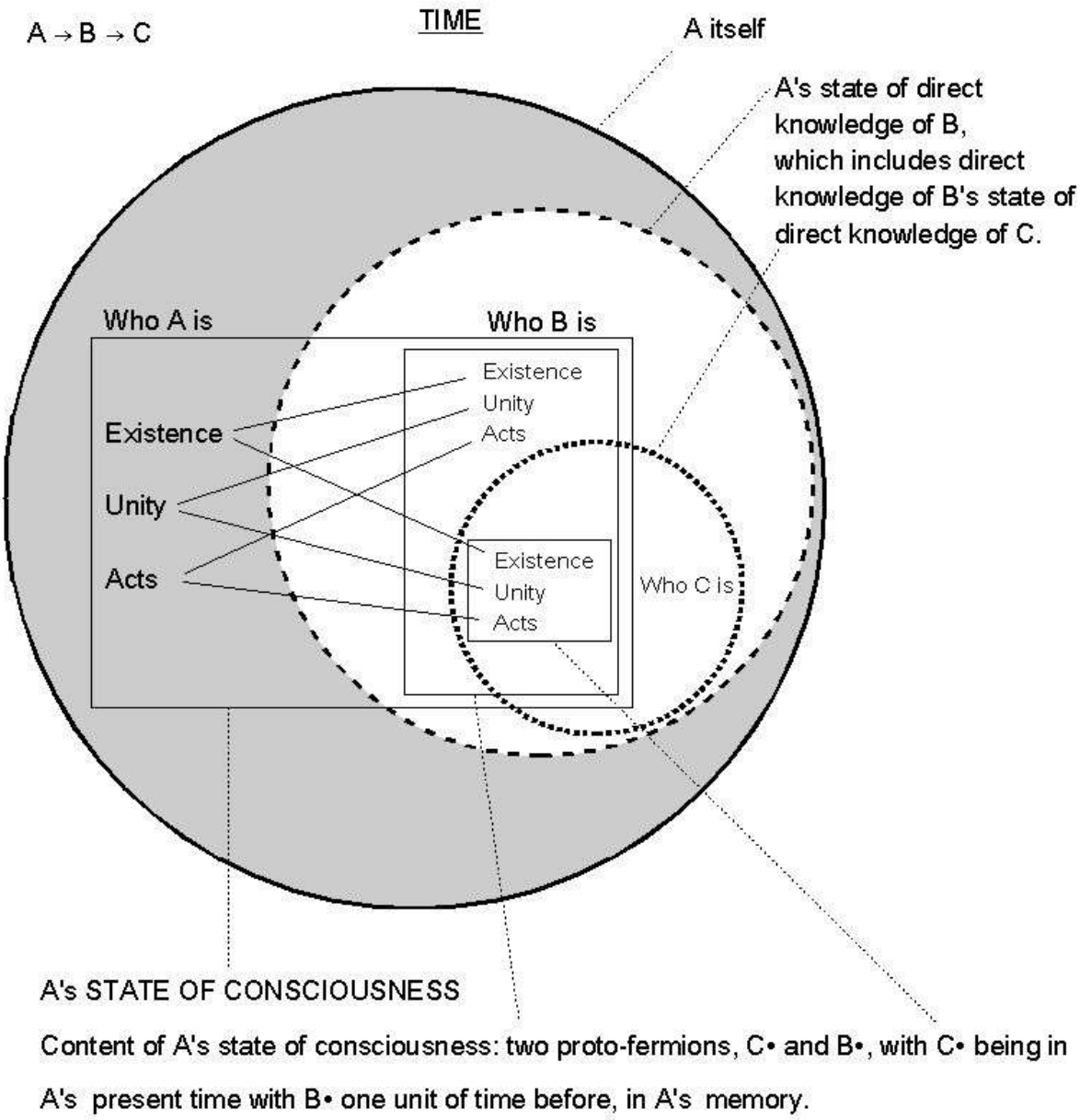
> A's STATE OF CONSCIOUSNESS, its content, is of A's state of consciousness is of the two proto-fermions, C• and B• with C• being in A's present time with B• one unit of time before, in A's memory.

49:55

Now, I'm leaving it… leaving out the lines of sameness because that's just… You already know that. But you have to think through the overall consciousness is one thing. Then there is this substate that's here of A → B•. So you get here B• and here C•.

50:35

That's in terms of consciousness. Before, when we are talking about these attributes, we were talking about knowledge. But when we're talking about particles, we're talking about in consciousness only. Now, Punita (Don) has made up this. I haven't had a chance to look at it. He just brought it this morning. So is that?



51:10

Don: A little… the changes… These lines are comparisons, not sameness. The result of the comparison is here. I thought of changing it from equals and not equals to same or not same. And this is a state of direct knowledge, a state of

consciousness. This comparison results in a proto-physical particle as does this one because of the lack of sameness that results in that comparison. And I put B in grayed out because it is a memory, because it's a subset of that state of direct knowledge.

B: So, if A chooses to be in state of direct knowledge of B…

Don: Which it has here.

52:22
B: And previously… not previously, I know this implies time also. But B is in state of direct knowledge of C. We have this situation.

Y: Yes.

B: But if it was… If A decides to be in direct knowledge of C, and B was in direct knowledge of C, then B is not in memory of A.
52:48
Bret: No.

B: No. B does not affect A being in direct knowledge of C. This is… then B has no…

Y: But if A is… if there is no arrow here…

B: Yes. Then…

Y: Then…

B: Then, this is not.

Y: Then, that is not true.

B: Does not affect…
53:12
Y: So, this is out. In this example, A is not in a state of direct knowledge of C. He is a state of no direct knowledge of C. So, it has to be contingent. If you're in this state with another arrow, then there is no time. You'll be conscious of time; but you will know that it is not time.

B: Although you don't have… you have A to B, A to C. Although you don't have A to A, still you are in no time. I mean…
53:59
Y: That's you; but the particles… There will be a particle here *via* this. So you will perceive. But you will know it is an illusion. This is the state I am in now. I live in that state, including this.

B: Including this. OK.

Y: Yes. Most of this, this, this,

B: Of that I am sure.

Y: That's all thanks to my teacher.

B: Great.
54:37
Y: So, I am not sure. As I said, I haven't looked at this. But Darshana (Catherine) has come up with the idea of contingency. That C• is contingent on B• being in the consciousness of A. And B can cut off A from this at any time. Remember that. So when there is an indirect connection, then one can… What seems like being an effect. You lose control over what you're conscious of. Nothing happens to you. But just the content of your consciousness changes.
55:28
So if you think what's in your consciousness determines what happens to you, then you really pray for the universe. The universe uses you as prey. But if you realize that the content of your consciousness doesn't matter, what it is? Because it doesn't affect you, it's just the content of the consciousness. Then you are free. Then you let them do whatever they want to do. And it is all the same to you. *Samadhi*. That's not part of the Lila Paradigm. That's part of Yoga. Anyway, do you want to read this some more?
56:26
B: No. I am reading this non-physical state of direct knowledge, state of consciousness…

Y: I will take a good look at it at my leisure.

Don: I also used volition for acts; I was just trying a different word.

Y: Volition?

Don: Yes. So it was a single word. That's all. I was trying things.

Y: Instead of ability to act?

Don: Just it was a single word rather than a phrase, that's all.
56:57
Y: (acknowledges) Like I found out I had to use *who it is* I couldn't use *who* or *whoness*. I have to use 'who it is.' That's the way it goes. Obviously, it's talking about a single thing. But English and most languages, I think, are so limited in this realm that you have to use a phrase to deal with a single item.

Bret: I understand this for computers; I think I can explain some later on.

Y: Good, that would be a good time to do it. This will be available to you later.
57:40
B: OK.

Y: So, I think this will be something that we go by.

Don: OK. I have got…

Y: I am trying to simplify it. Bright people carry on what has been said before rather than piling it all in.

B: These states of consciousness have meaning that see both that is non (?)

Don: Memory.

B: OK.

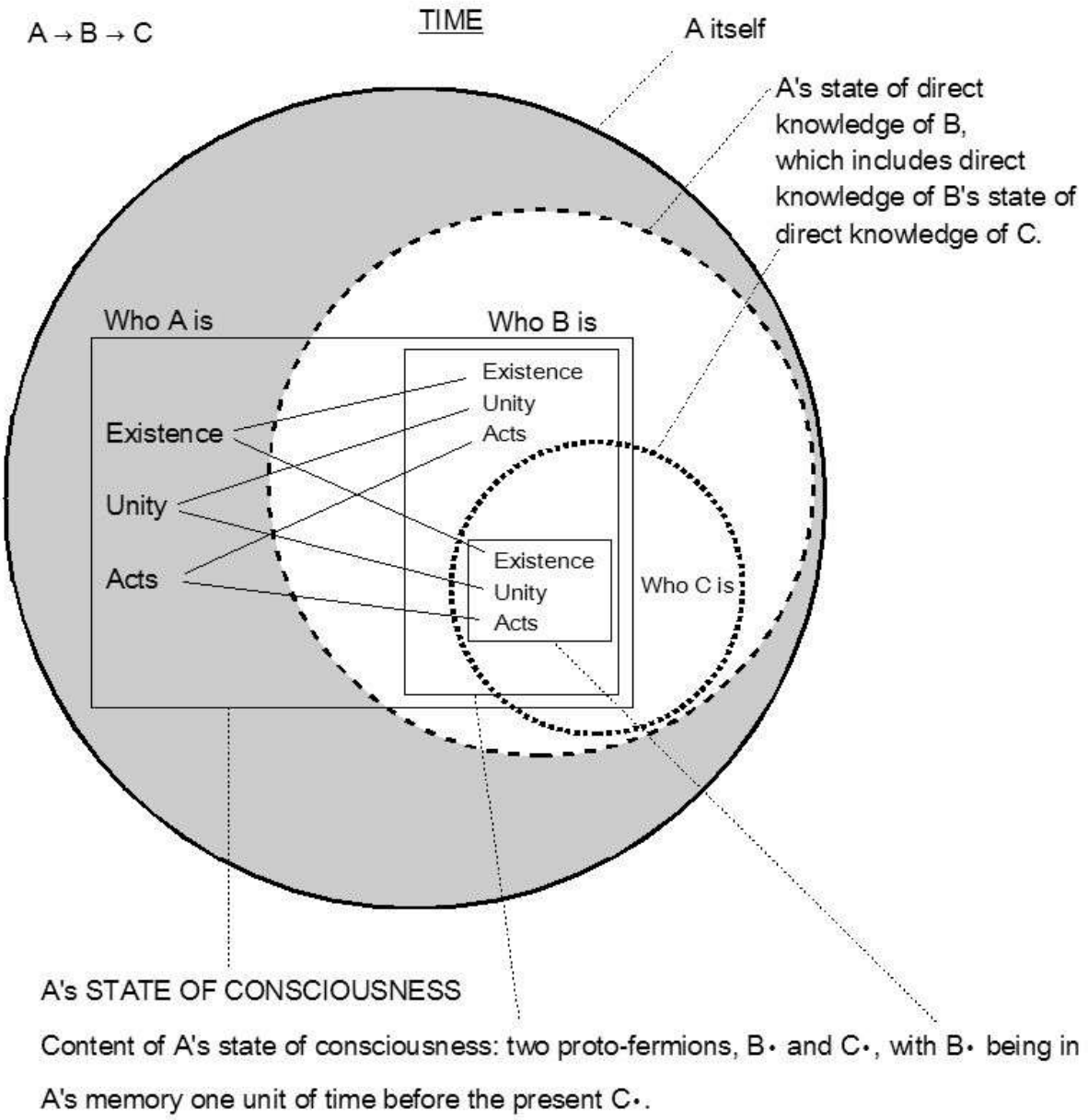
Y: OK. Now where we? Do you remember?

B: Page 18.
58:25
Y: Page 18 is it.

B: Yes.

Y: Ah ha. Alright. We're going to skip over that because it is just another version of the same thing. And we're going to go.

(Middle of page 20 The Lila Paradigm of Ultimate Reality)
Bret: **2.4 How a Common Universe Occurs**
58:41
Y: Yes. This was all such a problem between first person, second person, and third person realities. They're all a tangle in science and philosophy over this problem. And it is so simple even I can understand it.



59:05

(Middle of page 20 *The Lila Paradigm of Ultimate Reality*)

2.4 How a 'Common' Universe Occurs

In the following arrangement of non-physical individuals and their states, two conscious experiences of two simple-physical particles are had:

- one by Individual A and
- the other by Individual D.

The arrangement is given.

D
↓
A→B●→C●

(Individual B is only conscious of Individual C●)

59:32
Whereas, A is conscious of B● and C● and D is conscious of the very same particle B● and the very same unique particle C●. That's it. There is nothing to it because we have set it up correctly. That is very encouraging. You get easy answers.
1:00:00

What each consciously experiences is the same in content because Individual A and Individual D are in an equivalent relationship to Individual B and Individual C. Individual A and Individual D each are in a state of consciousness of a very young baby universe of C●, simple-physical-particle located in present time and of a conscious memory in present time of B● one fundamental unit of time in the past of that present time.

A●→ B●
↑ ↓ Arrangement 1
D●← C●

1:00:52
So, we have got a baby universe. And we have got a unit of time measurement. And it shows that time according to the Lila Paradigm is… comes in discrete units of a certain size. Now, I have found that by assuming that, that unit has the length of one Planck time, everything works out. That checks out with the rest of the measurements. Now, that's just an assumption on my part. But if it works, who's to argue?
1:01:36

For each of them, that baby universe is one unit of time old; this is called 'common time' in that it is common to both Individual A and Individual D.

1:01:52
This… if we have a… in each one of these is an A, or a B, or a, C, or a D, not in any particular order. And we randomly pick one that does this; and another one that does this, and another one here. These are the beginning baby universes. They have them in the GUTs theories where you have these universes, baby universes.

B: What theory?
1:02:51

Y: Grand Unification Theory.

B: (acknowledges)

Y: But what happens is…

B: Ah GUTs theories.
1:03:00
Y: Is, well, this will give a common one. But maybe this one goes over here, and we got… for this guy, he's got this. And it's in common with this. Then another one happens and another one. And then this one goes like this. And we are building up the… baby universes are starting to coalesce. Now, to figure out what time it is, you count the number arrows, and use one Planck time for each arrow.
1:03:45
But you are thinking of… in the consciousness of each individual who the arrow comes from. So the universe is different ages here for different individuals because a different number of arrows they are connected to. But as we go along, then it coalesces. They all become common time. But in the beginning phases of the universe, you have a bunch of little time lines, bits and pieces like this. And then they gradually coalesce.
1:04:27
You get a common time for all of these. But then you have got another bunch of them over here who coalesce. It is very interesting how rapidly this happens. By 10^{-40} of a second, most of it has happened. Between 10^{-46} of a second and 10^{-40} of a second, most of the coalescing has taken place. This agrees with the Grand Unification Theories, both of the most popular ones. These are also the various Higgs particles. Are you familiar with the Higgs Bosons?

B: Bosons?

Y: Yes.

B: In a way, yes.
1:05:35
Y: This is one. And this is another one. This is another one. When they are just taken in isolation like this, these are the bosons, the arrows themselves. These are the fermions, the dots. I am just trying to show… millions and billions and trillions of arrows in the universe, like it is, to describe the universe as it is, seemingly now. You get the same thing by just selecting it at random. You can select out substrates; and you can select out at random. At a certain number, you will get certain substates. It is the same thing as thinking this is… you're adding arrows through time.
1:06:53
Bret: Do you still have the print out of my first simulation? That excel wave figure?

Y: Ah, yes. I do have it under your folder if you want to look at your folder.

B: May I ask you something about this elementary unit of time? As it is found here, in this universe of arrows, you are supposed to find the elementary unit of time.

Y: Yes. This was worked out by Baker.

1:07:48
B: Yes. But my question is, “When he was find (developing) this…?” Yesterday I have drawn some of it. But I have a question regarding this. We have (N) non-physical individuals. And each of those (N) non-physical individuals has (K) states of direct knowledge.

Y: (acknowledges) On average.

B: On average.

Y: (K) is always the average in a direct graph.
1:08:19
B: These are (K) and these are (N). So every one of these is connected with their... (N) (K) minus one. If we neglect this one. And so… If I am connected to everybody else, then I am connected to (K) minus one say, multiplied by (N). So we have (N) multiplied by (K) minus one ((N)(K)-1) and because this is distributed to all the situations given here with these calculations. And this leads to P(π) to P half (π/2). This is divided by P half (π/2). And because this (K) could be further on… could branch into new (K) arrows. So we have… we go in depth. Then we have here D as a degree.
1:09:37
But my question is, “How was this formula found?” He has T of D is (N) multiplied by (K) minus one. This whole thing is on degree D because we go further and further on with branching. And this is divided by P half (π/2). And now my question is, “Since this P half (π/2) is obtained while observing the cross over arrows, leading to space actually, we have yet to come to this moment?”

Y: We’re yet to come to it. Yes.
1:10:20
B: And this is OK. And the E as a limit is calculated by seeing… by observing configurations like this one. If we have one, this is one factorial. If we have two of them, it leads to two factorial. If we have three of them, it leads to three factorial. So this is one over one factorial plus one over two factorial, plus one over three factorial. This leads to E. If this is so, why this formula is not further on divided also by E because this configuration is also embedded?

Y: I don’t know. Michael Baker would know.

1:11:10
B: Because according to my understanding the T… if we want to find this elementary unit, we must divide also by E because these configurations are also embedded.

Y: My mathematics is of the infinite mathematics. I don’t know well. And Michael Baker did this on the basis of probabilistic. I took his word for it. So if he has left the E out then; then he left the E out.

B: OK.
1:11:54
Y: I appreciate you pointing that out.

B: I was looking at his paper. Maybe later on when we finished this…

Y: It is called *Surveying the Lila Paradigm*.

B: Then I could show you how I did understand his writings

Y: Yes.
1:12:19
B: There is something else. Maybe now I will point it out. Just a minute… In his writings which are… it's connected with the discussion we had yesterday after the session about the discrete and the continuum mathematics.

Y: Yes. That's appropriate to… now because we just talked about a continuum.

B: Yes. Great.

Y: A time continuum.

B: He, in his derivations, makes a jump from discrete to continuous. It is well done, excellent. I just want to point out here because we deal here with discrete elements, that the mathematics is discrete.
1:13:12
Y: (acknowledges)

B: And he obtains difference equations.

Y: *Difference*.

B: *Difference* not *differential*.

Y: Yes.
1:13:20
B: Difference meaning the variable is a unit of time and discrete elements of time.

Y: He is familiar with *difference equations*.

B: Ah ha, OK. Great. And now he has discrete… The variables are discrete elements which are…

Y: This may be the mathematics that we need, the difference equations.

B: OK. I have this… some of this is in my doctoral thesis. And now… these difference equations are describing something like a step function.
1:13:57
Y: (acknowledges)

B: Because they are discrete elements of time.

Y: Right.

B: And he makes a jump. And he replaces the difference equation with differential equation which is OK because…

Y: An approximation.

B: In differential equation, we have…

Y: Are infinite.

B: Tangents which is showing us the growth and the function.

Y: (acknowledges)
1:14:26
B: So we might take advantages from… of the continuous mathematics as well, and not be wrong.

Y: Well, I think it would be right up to a certain degree. They are approximations, although they may go out 15-20 places.

Bret: It's risky. We may fool ourselves. At some point, we have to be careful.

B: Yes, but the… otherwise, you couldn't get magnitudes as you got it.

Bret: Yep.
1:15:00
B: Without this jump that he has done maybe he could have proceeded with difference equations. But it's very difficult. Also I have found a mistake here when taking into account initial… Here, I believe, it is clearly a mistake. This is the equation he gets. Now, here he is supposed to replace this constant with initial values. For Q is zero. Here it is said, M of Zero is zero. But if M of zero is zero, this whole thing would be zero. But if you… if we take M of zero to be (N), M of zero if it is (N), then the constant, this constant becomes minus (N) over (arboretum?) M of (N).
1:16:15
And then we replace the constant with initial value. If it is zero, this should have been zero as well. If M of zero is zero for Q zero. If we see… we are looking at this equation; M of zero is zero. If you say so, M of zero is zero. If M of zero is zero, then Q (and Q is zero), then the constant would be zero.

Don: It doesn't say that.
1:16:45
Bret: Pardon me, log of zero is undefined. If M of zero resolves to zero, logarithm of zero is undefined. Isn't that correct? You can't take a logarithm of zero.

B: Yes.

Bret: You can't take a logarithm of zero. See this term is the logarithm of M of M of zero.

B: It is minus infinity.

Bret: If M of zero resolves to the values here, you are taking…
1:17:02
B: No (? said?) but minus (?)

Bret: Then this term is taking the logarithm of zero if M of zero is zero. You are taking the logarithm of zero there.

B: Ah.

Bret: Or am I misinterpreting? Or misreading?

B: But then, he is not able to find the constant.

Bret: I don't know how we can proceed if zero equals zero.
1:17:30
B: It is not unspecific (unspecified). It is minus infinite actually.

Bret: Well, it approaches minus infinity.

B: This is the algorithm function.

Bret: It is undefined.

B: But it couldn't be zero. Or maybe it could be zero. But then we could not save the equation.

Bret: No, no.
1:17:47
B: So, this is some. This is maybe something. Maybe he is using some approximation or something.

Y: Punita, you should note that in your version of it. Because…

B: Just put a question mark maybe.

Y: If she gets away, we won't know what the error is.

Don: (acknowledges) So which page is this?

B: Page 11.
1:18:11
Bret: Am I correct about (ansatz, guestimate?) zero and logarithm zero?

B: Yes, this is logarithmic function. This is the logarithmic function. This is one logarithm of one is zero. If it is greater than one, it is this. And if it is less than one, it is minus sign. And logarithm of zero tends towards minus infinity. But clearly something should be done here. Since we are talking, this view should be corrected on page 4. This is G instead of Q. These are similar; and they are mixed up.
1:18:58

Don: It should be G.

B: Instead of Q should be G.

Don: That's on page 4?

B: Because here clearly we see first, second, third, fourth, fourth member. First, second, third, fourth member instead of Q is G. And later on, it is again G. So it is G.
1:19:00
Don: (acknowledges)

B: So it is clearly G. It is G. There was something else. Ah ha. Here should be equal instead of minus on the same page.
1:19:30
Don: OK. One second.

B: OK.

Don: Where is it? Thank you.

B: Later on, so we can estimate. It was minus; it should be equals. This is equals. This comes from this one, so it is equal. And it was something else, but I need time to find it.

Don: OK. Thank you.

B: OK.
1:20:26
Y: OK. Now we are at the bottom of page 20. We'll carry on.

(Bottom of page 20 *The Lila Paradigm of Ultimate Reality*)

In arrangement 1, each of the non-physical individuals is in a state of consciousness of four proto-fermions: A•, B•, C•, D•, in common present time.

A•→B•
↑ ↓ Arrangement 1
D•←C•

I think that it should be obvious that each has a memory of this quote 'universe' being two units of continuous time in duration old.
1:21:15
So if you count back from any one individual you can see how far back it goes to the beginning of time.

Each has a memory of the 'universe' being two units of continuous time in duration old. However, the sequence of the events in that common time is different and unique for each of them:

1:21:32
And I have written out there what their past looks like in each case.

A→B•→C•→D•→A; B→C•→D•→A•→B;
C•→D•→A•→B→C; and D•→A•→B•→C•→D.

And I say:

This type of circuit arrangement sequencing turns out to account for special relativity.
1:21:54
That's a very compressed statement, but I think it is the case. We are not dealing with the space aspect of it, but it underlies that each individual in his own place in the circuit (by the way, this is a circuit, not a circle) cause it is not in space. Each are in the same present time, but each has their own past. That's the same as any observer in the physical universe in a different relationship with other individuals experiences something a little different in its path - in its memory.
1:22:40
This one says, "No, this is what happened." The other one says, "No, this is what happened." And then they now figured out that, well, you see the light after one minute. And I see it after thirteen billion years. That would take a lot of development. But the principles is laid out, and is true no matter how many individuals are in the circuit, up to all of them. 1.23
1:23:10
One day Mike Baker and I worked out how many individuals out of the total (N) individuals are in the largest circuit. And it is proportional to (e) and (K). (K) is the variable. So the… a little later on… in the other paper, I give the formula for that. OK. We might want to look at that now because I want to work this afternoon on space because the wording gets very difficult. Ah, it's in the Appendix.

I want little (n). Here we are.
1:25:36
(Page 38 *A Radical Theory in which Consciousness and the Physical are Derivative on Information States of Nonphysical Agents*)
The formula is (e) is equal to the (Kth) root of (N) divided by (N) minus (n) [$e=\sqrt[K]{N/N-n}$]. It's page 38.

B: Yes.
1:26:12
Y: What do you have there?

B: This one.

Y: Yes, yes. That's it. OK. And you just solve it for little (n).

B: The number of agents is big (N)

Y: And little (n)…
1:26:32
B: Where (K) is the average number of non denials per-agents. OK and little (n).

Y: Little (n) is the number of individuals that are connected in the largest…

B: Ah, in the largest circuit.

Y: The largest circuit. So it is equal to (N) minus (N) divided by (e) to the (K) [N – N /e^K]. So this formula is the one for (N). It's the same formula. It just solves for little n. And…

B: And (e)?
1:27.20
Y: And it says the value of (K) can be derived from the measured value of the fine-structure constant, alpha.

B: Ah ha, you remember I asked why he doesn't divide by (e)? But just here, he is talking about dividing by (e). So it is taken into account, but differently. He is somehow dividing… if we go here…

Y: This was done.

B: (e) to (K)…

Y: Three or four years later. He may have discovered it himself.
1:28:05
B: Yes, because this should be taken into account these arrangements which are leading to (e). They should be taken into account. So this is e to K [e^K] is N over N minus N [N/N-n] e^K x N-N. E to K [e^K] ah ha, because… is the ratio of N over N minus N if we take it as a probability. But, then it should be the other way around. I am trying to understand why this is so. (e) is the limit of all these arrangements, all these specific arrangements. And this is clear. And OK. I should have… I might have… You have beautifully drawn here.
1:29:19
I might have this one connection, or this connection with two, or this connection with three. Each of them is combining and this leads to factorial. So I have one over one factorial, one over two factorial, and one over three factorial, which is the combination the substates C one, C two, C three. So this leads to (e) and since I have (K) non-denials per agent to use his wording… So (e) to (K) [e^K] is the overall… Give some average number of connections. (e^K) but why is it not…? If it is probability… When we are finding probability for something, the formula is the possible cases over all possible.

Y: (acknowledges)
1:30:33
B: The positive cases… the cases in question over all possible cases. But here it is other way around. This is not clear to me. If it were (e^K, the average number of all possible connections, because the connections are leading to (e) and the depths of it is (K), so (e^K) is the number of all… the distribution of all possible connection. It should be the smaller number over the bigger number. The overall number of agents is (N), of non-physical individuals. And (N) minus (n) is the rest of it.

Y: Those are the ones not connected.

B: The ones not connected.

Y: (acknowledges)

1:31:18
B: Because (N) are in the circuit, the ones not connected, according to my understanding, it should be (e^K) is (N) minus (n) over (N) [N-n/N]. Ah, ah ha, maybe he is doing a sort of normalization, a sort… He says (e^K) which is the number of distribution of all these arrangements. They are (e) because we combine one. Then we combine two. Then we combine three. This is leading to (e). And because when we go in depths, when this branching goes on and on and on, with (K) of the average number of lists of the branches, then it is (e^K). And this is, as if we have (N) agents distributed to (N) minus (n). So this is the explanation.
1:32:32
Y: OK.

B: So, this is the explanation. This is (N) distributed to the rest of the agents which are not in the greatest Hamiltonian.

Y: We can tell what the actual case is in this universe now. And it comes from this 'K is the square root of the inverse of alpha.'
1:33:02
B: Square root?

Y: Square root of the inverse of alpha.

B: Of the inverse of alpha.

Y: Now alpha has been measured. That is the coupling constant, electromagnetic coupling constant.

B: Coupling constant.
1:33:23
Y: I am surprised that you are not more familiar with that, as an electronics engineer.

B: He says here, "The value of (K) can be derived from the measured value or the fine-structure constant alpha, also known as the electromagnetic coupling constant."

Y: It is also 137, that famous number.
1:33:59
B: One… Ah ha. Because this 37 percent or 137.

Y: 137.

B: This is actually one over (e) [1/e], you know,

Y: No, I didn't know.
1:34:16
Bret: 137 or 1/37?

Y: 137.

B: 037 is one over (e).

Y: Ah! So that's different.
1:34:30
B: It is different. But it might be connection because you have mentioned electrical engineering. In electrical engineering, we have signals like this one. And this is, for instance, if it is T, this is (K) one minus A (on?) T. This function, where (K) is here. And now if I find here a tangent, and then this is 037. Why it should be derived? Because the tangent is the derivation of this. So this is the tangent… If this is epsilon (Y), DYDT is derivation from this one. This is minus T; this is minus. This is cos D T A (e) on minus T. And for T (rom?1:35.46) zero… For T = zero, because here we are finding the tangent here; for T zero it is DYDT = (K). And (K) should be one for simple (to make it simple). So this is one and we have… I don't need this T. This T, it was a mistake. We have (e) minus T. So DYDT is one over A on T. And T is zero, in this point. So this is one over (e). One over (e).

Bret: (acknowledges)
1:36:32
B: So this is 37. One over (e).

Bret: Yes.

B: And easily this one could be added somehow. But I am sure it comes from this one because we have heard like this curve. Have you seen Charles? If I have… shall I do it once again? To see where…
1:37:02
Y: What are you showing?

B: I am showing where this 37 comes from.

Y: That's 37. That isn't what I was talking about though. I was talking about 137.

B: I understand one point of descent.

Y: No.

B: OK. Then maybe it's different.
1:37:26
Y: No, I am talking about the electromagnetic coupling constant; and its inverse, is 137.03599976. That's its value. And that is the summation of a total number of arrows that are in this universe now. If you take the square root of that, it's just almost 13. So the average individual is accepting or is in a state of knowledge of about 13 others. But the average individual on earth that is associated with human bodies.
1:38:25
B: Ah ha, the errors you say.

Y: Yes. The total number of arrows in this universe is (N) times… is little (n) times (K). And for one particular individual, the number of arrows on average.

B: Ah, the arrows. OK.

Y: Arrows.

B: OK. Then I understood errors. And this is why I…

Y: No, no, arrows. Like Aeros.

B: The total number of arrows, yes. Connections of non-denials.
1:39:14
Y: Yes. So (K) is the square root of the inverse of the alpha which is 137. So if you take the square root 137 and divided it into one. No 137 is the inverse of alpha. And you take the square root 137, you get 13 or close to thirteen. So the average individuals in the universe, Divine individual or non-physical individual is in a state of knowledge of on average of about 13 others. Trying to give you a picture here. So the… but on earth, the average person doesn't… is not accepting thirteen others. What they are doing is they are one or two is all they are accepting. Whereas, other individuals are accepting millions and billions of others. So the average comes out to about 13. That determines the value of the electromagnetic coupling constant that couples the positive and negative charge. The strength of that is determined by this constant. And that's proportional to (K). In fact it is (K). How much they are coupled, causes the attraction. That is the electrostatic attraction that takes place.

Bret: The square root of 137 is 11.7.
1:41:18
Y: What?

Bret: The square root of 137 is 11.7.

Y: 11.7 but it has to be plus one.

B: Yes. It says plus one here.

Y: That's because… it has to be plus one.

B: Here it is written, square root of…
1:41:40
Y: Plus one. And the reason for that is that we're talking about how many arrows across the circuit. But there's one in the circuit. That's the plus one.

B: Yes. This is why in these other calculations, he is taking (N) multiplied by (K) minus one. Always.

Y: Yes.

B: And this minus one should be added here. This is the one from the circuit.

Y: That's right.

B: But once again, "How it is this 137 obtained?" You said.
1:42:19

Y: By measurement. Alpha. You want to know the whole number? What do you want?

B: The whole number is to degree 10 (or minus?).

Y: No. This is the degree of accuracy. It's the nine significant figures.

B: Ah ha. OK. OK, the degree of accuracy.

Y: Is 137.03599976.
1:42:53
B: OK.

Y: That's the value of the inverse of alpha.

B: And here you have the error or …

Y: That's the error here.

B: The error 50.
1:43:00
Y: We have a couple hundred of these correlations. But I… the wonderful thing is this. If you take… I am catching your habits here. You take a circuit, and you use this… You say this is common time; they are all at the same present time. So if you use that as your reference, you get a measurement of space. But if you take this, as we well see this afternoon, we take the circuit as a reference of common space. Then we get measurements of time. And this is the basis of Bohr's complimentarianism.
1:44:13
B: What the basis?

Y: Bohr's quantum complimentarily. The principle.

B: Ah yes, yes. This is throughout and comes to my mind when you mentioned it.
1:44:22
Y: You get a wave or you get a particle. Depends on whether you are measuring time or measuring… whether the circuit is used as a reference of common time or of common space. They have such an argument about it. They know they suspect that. If they could resolve that, they would solve the problem of gravity. And it would only solve half of it. OK. Now, we want to work on… This afternoon we want to work on space. So I'll leave that there.
1:45:35
I am beginning to think, Biljana, that between the two of us and a little help from our friends, we might be able to do this and get it close enough to right so that somebody might publish it.
1:45:55
B: Yes. I hope so. I am waiting to come to the point when I might explain to you what I was thinking … regarding the matrixes representation because you are always stressing the discrete mathematics which is, of course, correct because. ..

Y: I am taking the what?

B: Of discrete mathematics.

Y: Which kind?
1:46:23
Bret: Discrete.

B: Discrete.

Y: Discrete. Yes, like this.

B: Like this. And this is clearly discrete mathematics.

Y: Yes.
1:46:30
B: And this is one way… one possible theme or subject for a paper to be published. But also I was thinking of, because I am more familiar with this Gödel's theory, that this article could be published in a magazine for artificial intelligence because I could stand behind it.
1:47:00
You know, more clearly. This theory of Gödel I am lecturing for years. And every year I deliver 17 hours of lectures in Gödel's theory. So if we find a connection and there is a connection, at least this self-reference is a connection. We might show the limitations of the Gödel theorem and artificial intelligence as a whole and show the way for further investigation by introducing Lila Paradigm.

Y: Ah ha.
1:47:36
B: If we do this, I might stand behind this very firmly because I am lecturing this, you know. And if we are to publish an article in foundations of physics or something regarding physics, we might do as well. But I can't say I am a physicist. But Artificial intelligence is what I teach. This Gödel's theorem I teach. Here is where I swim like a fish if we come to this point to publish a paper. This is a suggestion of mine. I am suggesting that we might publish a paper in a magazine of artificial intelligence and not in physics.

Y: Ah ha.
1:48:30
B: Because, this is something.

Y: Because artificial intelligence comes close to the problem of… Is it possible for the computer to be conscious?

B: Exactly, but prior to this, before we start thinking about this, I should finish the presentation of Gödel's theory which I started yesterday. Remember?

Y: Yes.
1:49:00

B: And then only… then could we decide whether to think of publishing a paper in artificial intelligence, a scientific magazine or in physics. In physics, we might do it as well by introducing the matrixes.

Y: I see what you are suggesting. We'll finish that presentation on Gödel.

B: Yes. He is Gödel; he is Austrian.
1:49:30
Y: I was talking with David Finkelstein, the publisher of the international journal of theoretical physics. He and I and Catherine have become friends.

When I said, "Would you publish it?

He said, "Na, it's too speculative."

Then he suggested, "You should write a book giving the whole story."

B: Yes.
1:49:56
Y: He said, "You can publish the book much easier than you can get a paper published."

But I am not sure that the publisher would do it unless there was a paper published first to refer to.

B: No, I …

Y: Catch 22.
1:50:13
B: I also think you should write a book, you know, both a paper and a book. Why not? English is not my native language. Otherwise, I am good at writing books. I enjoy it.

Y: But you can catch all the errors and the logical lacunae, the logical blanks.

B: (acknowledges) You might do it with someone else, a native English speaker.

Y: Catherine is very good at English and logic.
1:50:51
Darshana: With these guys helping.

B: I could explain the idea, and you could put it into beautiful wording.

Darshana: Yes, I could.
1:51:00
B: I am good at writing books but in Macedonian. In English it is… my English is engineering English although I understand everything, I have no problem but…

Y: So we might have a paper in which we all are part of it because on something that's new and very radically different, the more people that are involved, the more

people think, “Ah, well, they can’t fool all these people.” So you have all these names there.
1:51:32
Darshana: It helps if you have your doctorate and have a university which you are linked to.

Y: Yes, you have a university position.

B: Where are…

Darshana: I don’t.

Y: You do.
1:51:47
B: OK. I said I do have. I have kindly asked a young student of mine who was translating the first chapters of my book to proceed with translating while I am here. And I specifically ask him to translate a certain chapter. I’ll show it to you. It is a dialog between (Sheri Putra?) and (Quantoff?). And this is a dialog…
1:52.17
Y: Imaginary.

B: Imaginary, yes. And I have created this dialog in order to resolve my own being divided between physics and philosophy. And so when I was thinking of it, it was like two persons in me were thinking over the subject. And so I divided these two persons into two imaginary participants in this dialog. So this is very beautiful and this scientific part is partly based on...

Y: It’s on your computer is it?

B: Pardon.

Y: Is it on your computer? The new one?

B: In my book.

Y: Yes, but that’s Macedonian.
1:53:00
B: That’s Macedonian.

Y: When will the English be available?

B: And this is why I asked my student to translate it while I am here. And maybe he will send it one of these days.

Y: Yes. Then you can pass it along.

B: Yes, yes.

Y: OK.

B: It is beautiful; and it is insightful. And to write the book, it is really a challenge.

Y: Yes.
1:53:26
B: But this is my only bad area. I am not native English speaker.

Y: I have written two or three myself in the past. In the middle part of it the book turns into a monster. And the book starts to eat the writer.

B: Oh.

Y: And then you have to fight it and finally win. And then you get it finished.

B: Hey Great!
1:53:51
Y: I learned that from Winston Churchill about how to write a book. He was a good writer, not a very good politician; but a good writer. OK. Then this afternoon, we will work on space and then finish your presentation, your power point presentation.

B: Yes.

Y: You want to see the rest of what she has on there.

Don: (acknowledges) Yep.

B: It might decide about the paper, at least to draw some outlines.
1:54:30
Y: Well, we'll start thinking about it. I have something on that myself. I have a bunch of quotes. And I have started maybe thirty papers and not finished them, but I have the front part.

B: OK. The most difficult part is finishing.

Y: Yes. It is how to get to it.
1:54:55
B: Great! I am happy. I understood these constants. But still maybe I'll search over internet to read more about this alpha although I do understand it. It is the strength that holds together these two particles.

Y: And that's the number of arrows.

B: The number of arrows.
1:55:12
Y: Across the circuit. The number of arrows crossing over a circuit determines the strength of the electromagnetic attraction between positive and negative charge.

Bret: Hum. Very direct.

Y: Alpha. Well, it is obvious.

Bret: Positive.

Y: The more the arrows the more the attraction.

Bret: Positive and negative.
1:55:40
Y: The more they're… You have to understand though… To completely do it, you have to understand what space is. And we'll have time this afternoon about that. OK.

B: OK. Thank you.

Y: We'll take a break I have a class at 12:30 to 1:30. You are welcome to come if you want. It is up to you, no requirements.
1:56:03
B: I'll come, of course. Thank you.

(End of formal session)

Don: Biljana, this is the book I mentioned to you yesterday. I …

B: (acknowledges)

Don: I flagged the places where he talks about this and a couple of other places. These electrons are among other things. And he talks about how he uses imaginary values, in real circuits for real reasons.

B: (acknowledges) great.

Don: So there is another thing here that… we were talking about-- time and finite…
1:56:42
B: Finite expression, the difference equations.

Don: Yes. But, anyway, how he deals with them in his calculus.

B: Ah ha.

Don: OK. So I thought you might just want to find it. It is an interesting little book.

B: I'll try to copy. Where could I copy it in…
1:57:00
Don: I can make a copy for you if you want a copy. So just look through it, if you find it interesting, I have got a scanner. I'll make you a copy.

B: Hey, thank you.

Don: You're welcome.

B: Thank you. Hey, wonderful!