An Introduction to Multi-Dimensional Identity

(Acknowledgement to Taylor A. Swift)

Multi-dimensional identity refers to the many labels which describe any 'Thing' as it exists, meaning both its describable states of existence and whatever processes generate, connect and count across those states. It develops through and out of a base2 pattern that becomes a multi-layered function which generates, relates and counts base10 numbers.

Part 1: The generation of numbers and counting

To describe multi-dimensional identity, I will first describe how the simplest derivable base2 pattern becomes a multi-layered function which generates, relates and counts base10 numbers. Let's begin with three concepts, Start, Between and End. A Start can be anything: you have an infinity of numbers to pick from, an infinity of ways to label any idea or any Thing as Start, an infinity of numbers and Things that aren't any Start now but which potentially could be a Start. You can say Start is any number of any length, so any Start is one of an uncountably infinite sea of other potential Starts. Take End and separate it from Start only by the concept that it is Not Start. This reduces Between to whatever processes connect Start to End and End to Start. These processes could be random: even if you pick two numbers out of an infinite hat, even if any number picked is reduced to the idea of a number, to some symbol or label for whatever you want to number, symbolize or label, then some process exists. Between contains the processes that link S and E, and contains whatever existence states are Between S and E, even when process and existence are reduced to the barest meaning, so B only exists as label for the statement that B exists. That draws a line SBE, Start-Between-End where S and E are only labels and B is the label for whatever relates S to E and E to S. If S and E are considered identical except for the label 'they are not the exact same in some determined or undetermined fashion', then B is the label for the process which links complete identity to minimal non-identity.

To Start with the basics, first count an infinite series of minimized existence statements. Call this line1. Interpolate a partial statement between any two statements: statement1, partial statement, statement2 or some representational variation like statement(start), partial statement, statement(end). A partial statement is the barest meaning of labeled existence, always occurring between statements and without any other meaning beyond the label. This counts a line of partial statements. Call this line2. These two lines don't have any points in common, but they each contain an infinite count of points. The two lines together make a line, call it line(a), that contains all the statements and partial statements.

Interpolate a second partial statement between any statement and any partial statement or between any partial statement and a statement. This makes two infinite lines of second partial statements, the line of 2PS interpolated between S and PS and the line of 2PS interpolated between PS and S. These together make a line3 of all 2PS, and additional lines line3(a) and line3(b) for the 'sublines' of 2PS. That is important: each interpolation of 2PS between S and PS or PS and S is a count, so there's a total set of 2PS and individual sets of 2PS(1) and 2PS(2) counted as interpolations between P and S and between S and P.

S is any value, and PS is any value that is not S, and 2PS is any value that is not S and PS. Since S, P and 2PS are infinite, then 2PS is any value, and PS is any value not 2PS and S is any value not 2PS and S. The order is bidirectional when considered from S or 2PS. When considered from PS, then PS is any value, and either 2PS or S is any value not PS, and either S or 2PS is any value not PS and either 2PS or S.

Let's say this a different way. A statement is a Start and another statement is an End, and there is something in Between. Take S and make Statement into Start. That treats PS as Between and 2PS as End in a chain SBE when you treat 2PS as a single End. If you Start with 2PS as a single Start, that makes an SBE chain of 2PS-PS-S. Since you reduced S to just the label of an existence state S, then all that separates S, PS and 2P is label. If you start with any number, value or Thing, you can end with the same number, value or Thing except they're labeled as Start, Between, and End.

Now take any two adjacent levels, such as S and PS or PS and 2PS. Count the points in any level. That requires referring to the other level unless one counts, for example, only a point S to represent all comprehensible versions of S. Render the count of points of any one level with reference to the other as 1-0-1. This is true for each level. The count of the points of the other level renders as 0-1-0. Start can be any point, which means every single point has multiple labels of base2 existence: each point on either line is 1 and each point is also 0. I label the count of one perspective with reference to another as 'bidirectional' counting. Bidirectional stands for the existence of 2 perspectives that reduce to a single countable line and to the existence of a single line that expands to 2 perspectives. It is the basic concept of counting, that any perspective counts the other perspective and the other perspective counts any perspective. Bidirectionality blossoms into the entire structure of this work.

Bidirectionality means that two points exist in relation to each other, that they create a segment with uncountable infinity between. As I will show, these points 'arrange' to form idealized squares and circles. A line or shape thus contains within it bidirectional uncountable infinity. This creates a relative unit that scales across any line as 1. I call this concept ru1 because it is the function that asks 'are you 1?' across layers. To begin to explain, the essential problem in counting is how you cross the infinities from one point to another. The answer is you don't just count from one point to another, but rather any count also counts back at what you're counting, because any process includes an existence state or point or End which can be valued by treating it as the Start of an SBE chain that counts back toward what was S. I will describe how these chains count individually and together, and how they count in layers. I call the overall function the CM, for reasons to be explained at the End.

To run through this again, bidirectionality is, in essence, an application of Cantor's interpolation method when perspective is neutral. Cantor's interpolation method defines uncountable infinity through branching chains of countable infinity. You can say bidirectional interpolation generates a relative unit which equals 1 or ru1, so the bidirectional function of ru1 describes S and E as the endpoints of ru1 and B as what links them. The use of S, PS and 2PS makes explicit that SBE generates in 2 steps out of any point to any Endpoint from bidirectional Start or Statement, so 2PS for example may be S separated from itself only by labels. Bidirectional interpretation removes the perspective implied in counting to or from some value or point or number, in recognition that any representation of a line, any counting at all, is necessarily a selection of some point which is relatively random compared to other points. That is, given the countable and uncountable infinity which surrounds any point, any selection exists as Start, Between and End. If you minimally label any point so it is equivalent to numeral alone, then the existence of the numeral alone states the existence of some other Thing, whether another numeral or not, which represents the other perspective of the SBE chains that relate to the chosen numeral, label or Start. The concepts will become clearer, but this represents ru1 as the bidirectional limit over a shared set. That limit 1 occurs because both perspectives of SBE cross or traverse the whole identity. The identity traversed has at least two dimensions, meaning at least two Endpoints, so it is multi-dimensional. I call a multi-dimensional identity a Mudi.

Bidirectionality is also a label for the inherent existence of an existence state perspective within any process by which and in which the defined system exists. This existence statement within the process statement is the bidirectional relation of S through B to E, and describes three sets that overlap: S is a set, E is a set and B is the set that links S and E, meaning it has attributes of both S and E. In its minimimum statement, B is the shared set between S and E, except each element in the shared set, which includes any version of the entirety of the shared set as B, exists bidirectionally. At the minimum, and as drawn later, the only difference between any bidirectional existence in the idealized shared set is the process contained in the label for the different SBE perspective as that label applies to any point in B.

Bidirectionality is also an application of Goedel's statements that define lack of completeness. Exactly how becomes clear in part 5, but I mention it here because a key to understanding bidirectionality is understanding how it contains incompleteness by reducing it to relative completeness. Goedel defined what a reasonably comprehensive system must contain, and then showed that, if the system contains what it must contain, it can't contain all that the system can contain, and thus is incomplete. A comprehensive system contains minimum statements about what it is or what it contains versus what it is not or does not contain. That is what I'm laying out, beginning with the existence and process statements discussed above. As I will make clear, the CM defines completeness and incompleteness through a mechanism which reduces complex and imaginary existences to real existence. This will be a constant theme: that which is uncountable or in some other way unknowable reduces to countable and knowable. You can see both in bidirectionality: it's impossible to fully describe and thus state the entire existence of any Thing because it counts bidirectionally, meaning it exists in more than one perspective. In other words, no Thing can be fully comprehended because each Thing can be comprehended relatively.

To develop the function which relates bidirectional SBE, let's start by manipulating the labels inherent in SBE. Since process contains existence which contains process which contains existence, and this is true in both perspectives, each point of existence occurs in two perspectives. You can view a perspective on its own and you can view both perspectives together. I call the concept of a perspective Minimal Context or MC. There are two, so they can be MC1 and MC2 and together MC1,2. The idea of MC is to acknowledge there are existence states of 1 and 0, of point and not point, of Is point and Not point, when only one point is counted. MC1,2 defines what I call Immediate Context or IC. The idea of IC is to acknowledge there is a relationship between 1 and other non-specified points, so IC adds the process statement to MC1,2 and combines them to make an existence statement that contains both. The other way to look at both perspectives is to include both points. That makes what I call Larger Context or LC. The idea of LC is to acknowledge the specific relationship between 2 specified points. It is the exact representation of bidirectional SBE and of bidirectional S-PS-2PS. Note how these Contexts also derive directly from the bidirectional count of one perspective with reference to another, that they represent the 1-0-1 and 0-1-0 labels for each point.

The level of MC counts 2 existence states in each MC while the IC level counts 4. The LC level counts 16. This is obvious if you take bidirectional S-PS-2PS, because that makes 4IC's or 4 chains of 4 existence states. Since ru1 scales counting, you can apply the same process statement to an IC made of IC's, counting 1 for 4 existence statements or 4 for 1 existence state. This means LC is an existence state that is in MC and is in IC with another existence state. This process iterates up and down in scale at the scale in which LC is IC. I call that level CM64. The idea of CM64 is to combine each perspective and both perspectives in a single level. It is the literal representation of both LC perspectives. It should be easy to visualize IC; it's just a matrix of 1 and 0, 0 and 1. To visualize LC, simply imagine that each of those 4 states takes a turn as the first 1. I won't say more here because nearly all the rest of this work develops the basic picture of these concepts.

Take CM64. If CM64 is Start, then End reduces to that which is miminally different from CM64, when B represents only the fundamental process statement, so you can label or think of End as Not CM64. This is bidirectional SBE where S is CM64 and E is Not CM64. Since the only separation between Start and End is Not, you can map CM64 to a corner and Not CM64 to the opposite corner of a CM64 square. This is the same as saying B consists of a layer of CM64 on or under a layer of Not CM64, separated only by the process statement inherent in the differences, both at each 'value' and, as noted before, and at any version of the whole. It is the same as saying you count to 64 from 0 or from 64. As you shall see in a moment, this means ru1 for the minimal statement of each perspective and both perspectives of SBE runs from 0 to 64. To clarify further, since the two LC's run from S to B and B to E bidirectionally, you can map the space as running from 0 to 16 and 16 to 0 layered on top of each other, or you can map the space as counting the bidirectionality as a whole so the LC's lay out to count from 0 to 64. It is very important to understand that CM0 and CM1 and other labels are separated only by a process statement in a Mudi.

Let's continue. Any count of 1 is an IC and that identifies an LC. Count one LC, meaning to B, in either direction of SBE along the idealized hypotenuse of CM64. That traverses CM16, but it also traverses the IC's within that LC. When the next IC is counted, that identifies the IC which is the identity selected out of the remaining LC, and that selection of IC thus implicitly counts the remainder of that LC. This means CM36, which is an IC past an LC within CM64, generates CM64 implicitly by selecting the IC which identifies that CM64. And it does this in both perspectives. To run through this again, when you count 1 that identifies an IC and that IC identifies an

LC, so that is CM16, and then you count 1 again and that identifies the IC which identifies the next LC. That means LC + IC = CM36 while LC + LC = CM64. Since these are bidirectional, counting within CM64 to CM36 in both directions generates two CM64's. These simplify in the ideal to the CM64 that counts up and the CM64 that counts down. This means CM36 is B when CM64 is bidirectional S and E. It also means that CM36 is equivalent to 2PS, to a second partial statement, to the 2nd step inherent in any SBE, to an E and thus to S bidirectionally.

You may know where this is heading: CM64 + CM36 = CM100. Think of that as SBE: S + B = E, so CM100 is E. And since SBE is bidirectional, then CM100 is S. This literally states that CM100 occurs at the start and end of any SBE chain, that it is literally at the endpoints of LC. This means CM100 occurs in any IC, because any IC is the view of any LC but when only S or E is explicitly stated. And that means CM100 is in any value, any number, any label. And since CM100 is the area of the count, then CM10 is the side. CM10 is of course base10.

What is happening is this: the layers inherent in bidirectional SBE develop up to CM64 and at that existence statement CM64 the same process statement you've been using occurs, and the existence statement contained in that process statement is what makes CM36 and CM100. To explain, in counting SBE through increasing layers, CM1 chains to CM4 and CM16 (or CM1), and CM4 chains CM16 to CM64, and now CM16 chains to CM64 to CM100. This enables what I call fundamental CM or fCM, which stands for the SBE chains that can be drawn up to CM100. Each layer is an 'operations space' in which fCM occurs, so if you treat CM1 as CM64 then fCM describes the fundamental relations within all the ways of counting and arranging these CM layers. The operations space up to CM100 is a count by two, meaning it represents base2; each count is a complete binary of 1 and 0 or 0 and 1. Counts by less than 2, for example, occur within the layers that relate to the layer counted by binary 2, meaning they stack within or on top of layers that count binary fCM. At CM100, the base shifts to base10. At base10, a value renders as a count of 10 existence states differentiated in an ordering by the 'space' in the ordering, meaning the process statement implicit in the space between the 1 and 0 of 10. The process statement disappears into infinity, thus generating every number, every actual real number, just as I described above. This statement is extremely important because it links 1 to 0, meaning it crosses the 'gap' in binary between 1 and 0 by reducing it to the literal minimum of uncountable infinity all rendered in decimal values. The powers of 10 reflect the squeezing out of all existence states within the ordering. Now you should also see both why ru1 is important and where it comes from: it is where fCM touches base10 so 1 crosses to 0 and 0 crosses to 1 at either ends of any counting. You can't cross the gap without the process that crosses it and the gap reflects the process that generates it. This means the process has to scale perfectly to fit what is being scaled and vice versa. Exact fit in scaling is ru1, which you should see is literally 'are you 1' asked through the layers of fCM.

So this is how it works at the very core: fCM flows through the layers to CM64, which invokes the CM100 layer, which is the number in base10 and base10 invokes CM100 and that flows through the layers. It's bidirectionality extended to the transition of the operations space so there's an operations space of fCM, so CM100 and CM10 as a side, and an operations space of base10, so 100 with 10 as a side, both layered on each other at each point and at each version of the whole so the base10 layer scales infinitely up or down and is accompanied at each layering and across all layering by CM100. As a note, I needed a name for the CM64 view and decided a label such as Total Context or TC didn't fit as well because TC doesn't convey either the transition to base10 or the fCM layers of operations that occur within CM100.

Let's play with this a bit more to show in very simple terms how fCM works. As you traverse CM64, you count CM28 within the count from CM16 to CM36. That also equals CM64 - CM36, so any count of CM28 invokes either CM36 or CM64. And CM28 could invoke a CM64 which is a CM16 in another counting. The layers all relate and you need to keep track of which layer you're counting in and which layers you're counting across. If you literally draw fCM out as a series of squares, which I call drawn fCM or fCMd, then you see SBE chains 4-36-4 and 4-16-4 and 1-4-1 all layered on top of each other. And all these both generate base10 values and relate base10 values to each other. The idealization of fCMd has tremendous power, as you shall see.

Take a moment here to think what this means: inside every single base10 number, inside any concept or event or result that can be measured or somehow in some way valued with a base10 number, inside literally anything that happens - because anything that happens can be traced out and measured in some ways - are patterns counting in layers that connect to layers that connect to layers. The patterns represent basic countings of perspectives. These countings make threads that connect this Thing somewhere over there to this Thing somewhere over here. You can draw that out as bidirectional SBE making squares you can add up.

Over the next parts, I will draw a basic portrait of how the CM works and what that means. It's important to begin with the very basic and build from those, so I'm going to shift in the next part to fundamental examples of the relation of fCM to mathematical expression. The next part mostly concentrates on Euler's Identity, $e^{i(Pi)} = 0$. I will describe how fCM generates both e, the base of natural logarithms, and Pi, the scale of circles and thus of curvature and non-ideal shape, as well as imaginary 1. I will also discuss what 0 and -1 mean in fCM. As a note, I prefer to use the word 'Pi' because the symbol is also used for other values.

But first, why is this true? Besides the obvious points that it connects base2 and base10, that it explains why numbers connect and, most importantly, why and even how you count, why is this true? Where does the CM come from? What underlying truth expresses itself as layered patterns within base10 values? One answer is that the CM represents the pattern generated by a fundamental change in form from that which is wholly contained within any Thing or that which is wholly external to any Thing, to that which crosses through from inside to outside and outside to inside. Take a set a{x} where a is the external value and x stands for whatever value is inside: the process statement of crossing over the inside/outside and outside/inside border is the brackets. When you say this unit = this unit, the process statement is the equals sign because even if the unit is truly identical it exists on either side of an equals sign, and that equals sign means there is potential that they might not be identical if you keep looking. That is multi-dimensional identity. Its essence is bidirectional layering of existence and process statements that, when reduced to their minimums, generate fCM and that, when idealized, generate fCMd. The simplest answer to why is this: it counts the multi-dimensional identity of a Thing as the insides of that Thing interact with the outsides of that Thing and as that Thing exists among other Things.

As you read, please keep in mind that all answers are countings. Expansion in base2 can continue 'forever and ever' without anyone or anything knowing or caring, without any invocation of unknowable or uncountable because it is entirely not aware, except when it runs into base10. That imposes an End because, at base10, the counting suddenly becomes meaningful. What is meaning? At core, it is an End in different counts: a count of 1-0-1 becomes a total of 2 or a count of an SBE chain as 1 or a count of 2 lines of 1-0-1 and 0-1-0, and so on. From that End where base2 mindlessly arrives at base10, meanings explode as they flow into and out of every single base10 value and every single Thing of any kind. So back at the Start, I assumed an End, then discovered that CM imposes Ends, and that means the answer to the question 'is there an End?' is yes, because the CM reduces the unknowable, the uncountable, the unnameable to the knowable, the countable and the nameable. All answers are countings and all countings have meaning. The trick is to learn how to count.

Part 2: The fundamentals of bidirectional counting

To follow the logic, it helps to understand this ordering: a Mudi describes the 1 and 0 relationship, which renders through fCM to the transition to base10 at CM64 and CM100. A Mudi exists in various dimensions, in both 1 and 0 and in fCM. Dimensions are counted across using Start-Between-End and S-P-2PS equivalents. Counting fCM has specific rules, which the following examples will demonstrate. Also note that an idealization is a count, but all counts are not idealizations.

A. One way to count a Mudi

The fCM patterning is the bidirectional translation between base2 and base10. It occurs at CM100. It generates and relates values into and out of patterns that are bidirectional when the individual perspectives MC1 and MC2 idealize. The key word is 'it', referring to 'bidirectional translation', meaning the process by which the existence states on one side relate to existence states on the other. Since this happens - and I'll identify where it happens later – you can count across the process statement using SBE chains from one side to the other. That's what you'll do now.

Remember, an LC consists of 4 IC's, 2 for the 2 Starts and 2 for the 2 Ends. Any IC represents a single perspective. An IC is where the difference Between any MC1 and MC2 idealizes to the process statement by which one MC label shifts to the other MC label. I treat MC1 as S and MC2 as E as the 'any' case in which the labels shift and the process statement Between reduces to the idealization that S equals E. In this idealization, S and E are treated as near as equal to possible, meaning there is no visible difference. I say 'visual difference' because I'll introduce the drawn version of fCM, meaning fCMd, so you can actually see there is no visible difference. The Mudi in which S and E are idealized as equals contains, in both dimensional shifts of S to E, the complex fCM patterns that relate to specific base10 values. In other words, S or E as a base10 value represents an fCM pattern. And that is bidirectional, so an fCM pattern represents a base10 value. This means that when you identify inherently repeating fCM patterns, then you generate constant values in base10. I slipped that in at the end: inherent repeating fCM generates inherent repeating base10, which means constants.

Let's generate a constant. Take an SBE chain that relates fCM to base10. I mean literally: Start with an fCM pattern and end with a base10 value, or vice versa. That is arguably the simplest inherent repeating pattern; it means the existence statements of S and E reduce to the minimum process statement of B, so if S and E are 1 then the 0 in 1-0-1 is the process of the label shift from fCM to base10 and from base10 to fCM. All you are going to do is count bidirectionally over SBE when S is fCM and E is base10.

Probably the most basic counting of SBE is 1-0-1, meaning you count Start as 1, Between as 0 and End as 1. Take either perspective, so you count SBE one way from Start to End through Between. This means you count B as 1 and Start and End as 0 when counting from Start to Between to End. This means you count from 0 toward 1 through Between. I'll state the rest and then explain: B is 1/n because n represents anything from a 1 step or 2 steps or however many you decide to count across B. This means the value of Start plus Between is (1 + 1/n). Put the perspectives together to count SBE bidirectionally and that draws a line made of (1 + 1/n) pieces, so when n = 11, the equation becomes $(1 + 1/11)^{11}$., That generalizes to $(1 + 1/n)^n$, which is of course the base of the natural logarithms. Note this only occurs because you're counting from fCM to base10 and back in the other perspective: the shift of 0 to 1 in Between and the shifts of 1 to 0 at Start and End directly manifest Mudi, and these become base10 values step by step as you turn fCM into base10. You can divide 1 into n pieces because fCM layers across the space and the choice of n is the idealized count of the layers at the level of n. So for example, n might count at any scale within n, meaning n is an fCM layer that summarizes all that occurs 'within' that layer into infinities of layers. Bidirectionally, you get the same result if you treat Start as 0, because that only moves the dimensional label shift from Start as 1 to End as 1, and that means the question re-phrases itself as Start being 1 because that the dimensional shift transforms End into Start.

To run through this again, by applying Mudi, you count the simplest possible SBE chain from fCM to base10 and back in the other perspective, meaning bidirectionally, and that generates a different counting scale whose base is e and whose specificity increases the more you count n. Using 11 pieces, the division of B into 11 pieces runs both from Start to End through B, so that makes a line which has 11 unit lengths. When n increases, the length added to 1 decreases, meaning B becomes closer to 0, which means B is closer to Start or End. That is how the specificity actually increases: the line approaches both Start and End bidirectionally as the number of pieces grows. And that explains why e magnifies up or down: the value measures SBE in either direction.

The idea of Mudi and the ordering SBE are why you can build chains across countable infinity. If you count Start as 1, then you count 1-0-1 when you count Start and End only. If you count from Start, then you impute the value of 0 in the chain 0-1-0 and when you count 0 then you impute 1. This means any SBE chain counts from fCM to base10 and base10 to fCM. It becomes more obvious when you realize you're counting toward both Endpoints, that the process statement contained in Between operates bidirectionally toward Start and toward End. That enables you to grasp that the value of SBE develops at both ends as it develops in the middle, that the value of Between works out to be e when there is a base10 value at either Endpoint. Or in other words, when B takes its base10 value, then the Endpoints are in fCM, and when the Endpoints are in base10, then B is in fCM. In normal use and through history generally, you compress this Mudi, literally the Mudi of SBE, so you see the base10 values without recognizing they reflect fCM at each label.

By idealizing IC, the existence statements of S and E are separated by the multi-dimensional process statement of B, and you can measure the inherent separation between iterations of S through B into E as having a scale equal to e. In other words, the value of e stands for the counting scale of a Thing existing as a Thing from iteration to iteration across iterations. That is the same processes that made the gap between 1 and 0 in 10, only counted in a different fCM order. This should make clear there's an operations space, meaning an area, which expresses these two different fCM processes, one that uses e as one scale and powers of 10 as the other. Any value within the operations space can be considered using either scale as that count expresses fCM processes. Any Start. Any End. Any Between. This is, of course, a fundamental reason why the function e^x is its own derivative: it is pure counting of pure counting of pure pattern, which is a rarefied animal. That explains why e describes at scales as different as the shape of galaxies made of billions of stars to a beach made of billions of grains of sand: each star or grain of sand is counted bidirectionally across the Mudi of the galaxy or beach to draw out the shape of a logarithmic spiral in the e scale counting layer. Take a moment to consider: though you know the stars and grains of sand align, it's never been understood that the mathematical descriptions express the relationship between base2 patterning and base10 values, which means the stars actually align and they are grains of sand. Individual Things fit into patterns that make a larger Thing and these patterns occur within each moment and across moments so all Things are relatively connected.

B. Another way of counting a Mudi.

Next I want to count the SBE Mudi in a slightly different but equally profound way. You so far have counted a single SBE chain bidirectionally to generate the value of Between. That in base10 equals the constant e, with the increasing specificity of e occurring at both Endpoints of Between. That means counting Start to End has two Ends. This is embodied in the Statement-Partial Statement-Second Partial Statement or S-PS-2PS expression of SBE: a chain may count S-PS-S or S-PS-2PS, which in the simplest terms means that S may be separated by the minimum expression of B either from itself or from something else. To embody that, you can add a label so if B counts toward S, that is a count of (-1) relative to a count toward End of 1. This describes the count of 0 to 1 bidirectionally across B when you take both perspectives and count one of them. In other words, sign and negative numbers arise from counting both perspectives using a single perspective.

Now that you have sign, you can see that counting SBE chains can run 1-0-1 or 1-0-(-1) bidirectionally. If you count B, that means an SBE chain of 0-1-0 is also 0-(-1)-0. A Mudi where S and E are 1 generates the ideal squares of fCM. You can say that is a real Mudi because fCM and base10 relate bidirectionally from and to real values, when you assign real values a direction or label them as an End for fCM. This count of both perspectives using a single perspective invokes a Mudi which relates -1 to 1. This makes a Mudi which counts in B toward 1 and toward -1, which means there is a ideal square of area -1. That makes an imaginary Mudi. So when you count using both Ends of an SBE bidirectional chain, you count from a Start that is real through B to an End that is imaginary. Or you Start from the imaginary through B to an End in the real. In other words, counting the Ends of an SBE chain generates negatively signed ideal squares and those squares have imaginary roots. This means counting both Ends creates a flow from the imaginary into the real and the real into the imaginary. This relationship is contained in Euler's Identity.

C. Making Pi

Euler's Identity is $e^{i(Pi)} + 1 = 0$. Let's discuss Pi first, which I'll do by describing the ideal circle of any Thing in IC. As I will explain, the ideal circle represents the count of a Thing, together with the count of any Thing as it exists in IC. As noted above, a Thing in IC is a specified point in relation to 'any' non-specified point: the specified point 1 is MC1, so the non-specified point is whatever is the 1 in MC2. The count of a Thing in IC counts that first Thing and then counts the 'anyness' of that Thing.

When you count from specified 1 toward the non-specified 1, that bidirectionally means you also count from the non-specified 1 to the specified 1. This is the same as counting from 1 to 0 bidirectionally, except the other perspective of the 'second' 1 is from 'any' non-specified point in IC. Counting bidirectionally from specified 1 to non-specified 1 links S to E through B, which defines the shared set. The origin of the ideal circle generates when the count of any S to E over B yields the same E. At that End, each iteration of 'any' Thing is separated from any other only by the label that they are not the same iteration, meaning all the iterations of End reduce so they are separated only by the process statement Between with no visible existence statement Between. The circumference of the ideal circle generates when any Start has the same process statement Between it and End, and an existence statement is 'visible' at the level of the ideal circle. By 'visible', I means it is only visible in fCMd as the circumference of the ideal circle, so any point Start is the same as any other Start. An ideal circle represents this relationship of an existence statement visible at the circumference counted to and from no existence statement visible at the origin.

You can of course switch the labels Start and End: each Start is the same, separated only the process statement with no visible existence statement, and each End is now different. The only difference is an existence statement at End: each Start is the same, and the process Between Start and End generates the exact same result except for the smallest possible separation at End.

To explain how this count works, I introduce something I call 'tick-tock': take an ideal square, label the points S and E on one hypotenuse and B1 and B2 on the other. The tick is counting either hypotenuse first and tock is counting the second, meaning 1-0-1 or 0-1-0. You can tilt your head to tick to the B hypotenuse and tock your head to the S-E hypotenuse, back and forth. At the first level, a single tick-tock makes 4 points. The next tick-tock level has two iterations, just as S-PS-2PS generates complexity at the second step. That second and all further levels are the simplest iterations occurring within any Thing as they disappear into uncountable infinity and as they build up toward the counted value of any Thing.

The idealized space Between tick and tock at any level forms the visible limit of the ideal circle for that level. This is true for any Thing. The ideal circle is a count of the limit as it occurs at every single definable point on the circumference, both as that point is counted to and as it is counted from. Because this visible limit occurs bidirectionally, then any 'top level' of a Thing is defined externally in the same manner that the included levels are. By 'top level', I mean whatever you call the Thing's existence in that 'context' as counted from the perspective of the context. I go into more detail about the 'top level' of a Thing in part 5. That is what you are counting now: the count of a Thing within a non-specified 'context', where 'context' is a label for a 'field' of Things, and where 'field' means whatever else exists in some relation to the Thing. I call the basic field of Things a 'T Field'. This means a Thing exists at a top level in some undefined T Field. It also means the tick-tock iterations of ideal squares are also the clock within a Thing's existence as it is counted in the T Field. It means a Thing tick-tocks through the levels of its existence.

At any point on the circumference, the tick-tock levels disappear into progressively smaller 'pieces'. That's crucial: no matter which point you choose, you can measure deeper and deeper into the digits of Pi. You can see this happen as you rotate the ideal square: as the counts of levels adds up, the additional rotations bidirectionally approach any point on the circumference. This means in an ideal circle with a diameter of 1, it is Pi distance to and from any point around the circumference. This means Pi scales any point on the circumference, and that means any circle with a different diameter, larger or smaller or smaller than 1, continues to disappear into any point on its circumference. In part 4, I'll discuss the meaning of the millionth digit of Pi disappearing into any point. Note this projection, magnification and dimunition of circumferences is only possible if there is a function that transforms the scale value of Pi to the size of any circle. Note also, this is part of the fundamental statement of a limit, that the tick-tock levels of SBE disappearing into infinities also arise from the murky depths to become a discernible value of some precision.

I'll now derive the existence statement that separates iterations in the ideal circle. First, each visible iteration differs from any other iteration only because it is not any other iteration. There may be other iterations but they repeat the same SBE chain, and thus are separated from each other at both Endpoints only by the process statement. This means there could be iterations of the ideal square that aren't visible because they appear identical. Second, iterations of the ideal square impute a fixed origin at the point where the hypotenuses intersect. All visible iterations of the IC of any Thing bidirectionally counts toward the same origin from and to both S-E and B1-B2: as S counts to E and E counts to S, and as B1 counts to B2 and vice versa. I call this origin the 'bip' for reasons I discuss later. The count to bip happens through tick-tock: it ticks to B1-B2, which contains the process statement difference that makes the visible existence statement, and tocks to the E that's not visible except as a stack of E at the origin. It also ticks to E, etc., if you prefer. You can visualize tick-tock as a square appearing, then collapsing or disappearing to the imputed origin, then expanding to a square, and so on. To be clear, fCM counts area-point-area or point-area-point as 0-1-0 and 1-0-1 and SBE and so on. This occurs in each threading of iterations, so you again see branches of countable infinity generating. I cover this topic more in part 4.

Now for the actual fCM that defines the process statement which makes the visible existence statement. One way of approaching this is to note that each tick-tock of a Thing creates a 'shape' that exceeds the original area of the ideal square of the Thing. By 'shape', I mean only that the total count exceeds CM100. This means it exceeds CM100, and that means you need a bigger scale. Counting up to a larger scale means you have a Thing getting bigger within a T Field. To generate this larger scale, you magnify both CM100 and CM64. You do that by squaring each. That is why I said 'larger scale': by treating CM100 as a side, as the count of CM0 to CM100, that generates a scale for a larger base10 field. Enlarging CM64 means you make a CM64 field of CM64 Things, meaning you square CM64 to idealize it. This is fCM scale as opposed to scaling fCM by base10, making CM4096 instead of CM640. In the fCM scale, the pattern counting rules remain in effect, and that allows these fCM calculations to occur within the Thing and thus within the drawing of the ideal circle. This happens because the pattern function ru1 crosses from the T Field into the Thing and out of the Thing into the T Field. The result is a base10 field of CM10k that contains a T Field of CM4096.

The other approach is that each tick-tock creates a 'shape' that is less than the ideal square, that tick-tock is counting down, that each tick identifies an amount to be cut away or which is treated as negative in the direction of counting up. In the layers of fCM process, the tick makes an area which disappears in either positive or negative direction on tock at the bip. That sign choice is yet another repetition of S-PS-2PS.

The first approach creates a T Field. The second approach places the visible existence of that T Field within any Thing. That requires reduction of CM4096 over CM. Reduction in fCM is different from base10 reduction: when counting base10, you glide over 0 as though it were another number, but counting CM treats CM1 as CM0, as complex 0. To reduce in fCM means you use the CM1 to CM10 to CM100 scale within or on the other side of CM1. There are chains leading to CM1/CM0 and chains leading away. This is reflected in the shift of the decimal place from the right of 1 to the left, which expresses the process statement inherent in complex 0. That makes the chain of counting run from 1 to 0 and 0 to .1 or 1-0-.1. That is the same fCM process followed when defining the imaginary Mudi so the process generates magnification up or down instead of sign or, more accurately, as up and down counts in a multi-dimensional identity that also counts sign. To count within CM1, you begin at CM.1. I will revisit counting within CM1 in part 3.

CM4096 'flips' over CM1 to become CM.0004096. In the 'up' direction, you counted CM1 to CM100 to CM10k, meaning 10^2 each step. In SBE, you could say Start is CM1, Between is CM10, and End is CM100 bidirectionally. I mention that as a reminder that fCM counts in both 2 and 3 steps. When you count down, you count the same 2 steps in 10^{-2} within CM1. Again, because it's important: you need to cross over CM1 so you count 'up' or 'down' in 10^2 steps from there. This counts down to ten-thousandths, and generates CM.0004096. That reduced figure is still a CM64 x CM64 field, but the base10 meaning has changed. Note, you don't invert CM4096 because that describes how many of the CM4096 scale fit into 1. An inverted T Field is not a T Field 'inverted' or reduced in fCM, and the difference is that an inverted T Field keeps the decimal point to the right of 1, while a T Field inverted moves the decimal place to the left. That means an T Field inverted in this manner is 4096/10,000ths, which preserves the relationship of fCM to base10.

What is the meaning of this reduced T Field? The fCM value CM.0004096 represents the value of a T Field within CM1, meaning within a Thing. You have taken the magnification of a Thing up to a T Field, and counted it down across CM1 so it crosses inside a Thing. That means part of a Thing is attributable to the inherent existence of the T Field. This is the visible existence statement which separates iterations of the ideal square. It is the effect of the T Field visible within a Thing.

The visible existence statement is an area, and its square root is its scale. The ideal scale, meaning the scale of a Thing at CM100, is CM10. The scale of CM10, meaning its square root, is scale of that which is within a Thing. That means you reduce the square root of CM10 by the square root of the visible existence statement. That generates a value for Pi of 3.1420. Understanding this fCM description, it's easy to see that Pi is a side that scales the area of r^2, so fCM operates at the level of r x r. That r x r is counted fCM, meaning it is pattern and has a pattern value that we treat as a side versus whatever scales the pattern. This is a critical piece of fCM counting: layers combine in part because the idealization into ideal squares is the fundamental scaling. Pi is the scale multiplier that shifts ideal square into ideal circle.

Pi connects area and diameter across fCM to base10. To restate the fCM, as SBE counts the diameter, SBE counts along the circumference because that counts the Start or End of every non-specified Thing at that Endpoint. This creates two chains. The diameter chain counts from specified origin to the non-specified circumferential point that disappears into uncountable infinity of fCM process. The circumference chain counts the non-specified points. This means the concept of ideal circle is entirely relative: SBE chains may count to any depth so they may be counted around at any depth as they count across to any length. It also means origins impute relatively as well, a subject we'll consider in more depth in part 5.

To be clear, note how side ticks to an area up or down; the bidirectional SBE is square root CM10-area CM10-side CM10. You can see how the SBE extends when you add CM100 so it counts area CM100-side C10-area CM10. It's important you understand that this reduces the iterations of 'any' Thing, as 'any' is represented by layers of rotations disappearing into infinities. The reduction occurs within a Thing when a Thing consists of all the layers within CM1, meaning all the ideal square rotations counted within the top level of a Thing. And again, this reduction occurs at any point because each point is an iteration of an ideal square rotation.

The next three paragraphs are an older version of the preceding paragraphs. I think they add some value. To count the tick-tock Between Start and End, idealize the reduced fCM value, meaning treat it as an area, then subtract that side from the side that idealizes to the side of B. The scale of B is CM10, because that idealizes to CM100. Since the scale of B is itself an idealization in ideal squares, CM10 is an area with sides that scale it to fit. This is again the layering of fCM. To adjust the scale of B, adjust the side that idealizes or squares to CM10. Again, the process of side into area, area into side is fCM: it expresses label shifting in the bidirectional count of SBE, 1-0-1 and 0-1-0, etc. It occurs within CM100: CM1 is an area and a side, which expands through fCM to CM10 as an area and a side. So in fCM, from the CM100 End, the scale of B reduces from idealized CM10 by an idealized area turned tick-tock to make a side.

To restate, you count from an non-specified Start toward a specified End where no visible existence statement exists between SBE iterations. You label that End the origin and the difference Between any Start and any other Start is the visible existence statement that appears, for example, if you count from the same Start to an non-specified End. That Between is the amount by which the scale in base10 is changed by an amount which represents a field of CM64 Things reduced in CM100. It is literally the amount by which the side of CM10 is reduced in each Thing when it iterates within the top layer count of that Thing.

That is the rotation of tick-tock: when you count 1 from Start to End, then as the tick-tock counts, the line from Start imputes the next point in tick-tock. You can visualize the tick to B counts the value of the hypotenuse drawn from Start to End, so the area of CM64 becomes a side of CM64, and that idealizes to CM4096, then tock back to side of CM64, all by shifting labels within the same sized ideal squares. Note I'm describing the simplest idealization. I'm doing that not only because it's necessary to 'Start' with basics but because the simplest fCM idealizations generate most of the 'End'. That is true because the simplest idealization represents the reduction of the layering of fCM and the generation of complexity with any 2-step.

I'm counting 'any' Thing, which means this relationship is true at any point imputed at the end of the count of 1. For a Thing in IC, any Endpoint from that Thing as Start counts at the End as 1 in a countable relation to the other imputed points, all of which scale the same because they are 'any'. This means each SBE approaches the same origin as the SBE tick-tock aligns the other Endpoints on what is now the circumference. To be clear, you can think of tick-tock as the underlying reason for and manifestation of the rotation of an ideal square when the origin is imputed versus 'any' non-specified Thing. That idealizes to polygons with more and more sides. Underlying tick-tock is this: the CM represents the countings and idealizations that underlie base10, so when the origin of a Thing imputes versus 'any' Thing, there is a counting of that 'any' versus the origin. While each 'any' and each potential imputed origin idealizes, that leaves an infinity of potential imputed origins, all of which appear in an idealized count when you look at 'any'. If that isn't clear, I return to this subject in part 3. I will discuss T Fields in more depth in part 5.

A peculiarity of Pi is that it's, in essence, defined externally; it's the effect of an non-specified field on a Thing, on the existence of a Thing in IC, where the Thing is Start and End is any other non-specified point. That explains why a Thing fits at different depths or tolerances: it works for any non-specified field, meaning any existence outside the Thing. This also explains why Pi scales radius to area. The idealized radius represents the side of an ideal square, meaning it includes and expresses whatever fCM processes define the Thing, and that generalizes to IC scaled by Pi. That is important: it is the internal area of a Thing scaled to IC by adjusted CM10. In other words, the existence of a Thing is, as stated in part 1, it's manifestation in IC, in relation to anything external to itself. Note how incredibly flexible fCM is because the reduction of the process statement Between at Start and End allows shifting layers that then are countable on their own. I explore a bit of the relationship across layers in part 4. I dive deeper into T Fields in part 5 where I consider an example of a specified T Field.

To step back, I've developed two constants out of fCM. The first counts from 1 to 1, while the second counts from 1 to 0, and thus from 0 to 1. Think about the simplicity of that statement. Count from 1 to 1 and the line divides into the pieces that combine to define the scale of that line and thus the scale of e. Count from 1 to 0 and that generates the scale factor that transforms the ideal square to represent the tick-tock representation of a Thing in the IC of an non-specified T Field. The value of e is exact because it represents the pure fCM processes translated into base10. This value of Pi is exact to CM100 depth. I talk a bit more about the question of depth in numbers in part 4 and in part 5 I develop the fCM processes used to generate Pi to one more fCM layer.

Since you've made it this far, I want to add a few higher level sentences. Counting an unspecified relationship is applicable in a vast number of situations and develops extraordinary complexity. For example, imputation to End as origin - remember, it's also Start - generates a countable chain within the Endpoint so each Endpoint is both uniquely specified and ideally specified. That is a topic of part 4. Concepts of specificity and non-specifity are crucial. One phrasing is the ideal End of an SBE chain specifies at origin and at any other point, but not at origin and all other points, and thus an SBE chain specifies in MC1 perspective and non-specifies in MC2 perspective. Those are simplified statements of fundamental contradiction: if you state both perspectives, then a Thing is both specified and non-specified, and that only occurs in the SBE chains that lead up to and down from the contradiction point. I later refer to that as the fracture point, because all meanings grow up to and down from an imputed point whose multi-dimensional identity can't collapse further without becoming both specified and non-specified.

D. Euler's Identity

I can now more fully describe Euler's Identity. To paraphrase and revise Shakespeare, the Identity is a tale, a count of steps on the e scale, told not by an idiot but by the CM so it signifies -1 instead of nothing. The reference is based on the idea that nothing is actually complex 0, and that life's reduction to nothing is 'signified' in fCM sign. What is -1? It is the directional negation of 1 and is a counting of MC2 in an IC. The entirety of the Identity generates this fCM counting: Pi in this tale times the sMudi of i acts as some form of complex 0 which carries negative sign so the scale of e counts -1. This means -1 retains the dimensional complexity necessary to negate any counted positive or real 1. It means complex numbers relate to real numbers through the sMudi(i) scaled, so all scale transfers in and out of the imaginary and complex realms. In simple terms, it means that any base10 value counted as 1 relates to the complex and imaginary which directly negates that base10. That negation is what makes the base10 value when counted 'up' from the imaginary and complex. The other fundamental scaling process, the magnification scale of e, also transfers into these realms, meaning it scales the SBE chains related to the imaginary and complex Thing as that patterning climbs up or across to base10. It makes imaginary Things that relate to real Things. The Identity is a gateway through which complex processes become real Things and real processes relate to complex Things and complex processes. It transforms any multitude of complex fCM statements into the simplest counting at the level where those fCM statements obtain base10 meaning.

To connect this description to fCM one more time: the process inherent in counting on the e scale, meaning a Thing magnifying up and down, matches values in the positive or real realm to fCM by generating a -1 that contains the complexity which offsets or negates any positive or real 1. This process reflects and generates a sMudi within IC, one that relates sMudi(i) to the real sMudi(r). When written in classic form, the 0 in the Identity stands for complex processes that negate in some dimensions but not all. This has the effect of isolating negation to the infinite reaches of transcendental value, thus mimicking the basic infinities problems. That is simply: you can negate and negate and negate and you'll never stop counting negations and each negation can be considered as scaling from 'Is a negation' to 'is Not' bidirectionally. That yields uncountable infinity, so any appearance of 0 contains another 0 that appears alongside any expression of 0, which takes us back to the fundamental derivation of the CM as the counting function that enables and then assigns meaning. This is the same of course as saying B is between S and E, and that B contains SBE threads, and that each of these also contain 0. It describes IC. Or put yet another way, each term, meaning each 1, is surrounded by 0, and that is a Thing in a non-specified T Field. Euler's Identity is a compact way of stating that if you have 1, then negating that requires complex fCM processes which describe different fundamental dimensions - whose most basic shape I'll discuss below - so that negation equals a complex 0. This is of course true bidirectionally because taking 1 and complexly negating it is a statement of perspective. As a note, this complex 0 is why the count of any 'number' or statement raised to the exponent 0 is 1: that is where absence of counting this 'number' yields the 1 of a Thing that is Not the 'number'. It's difficult to imagine a better example of how the CM generates and describes mathematical and physical identity.

One more point, complex 0 not only stands for the process statement that separates labels in fCM, but is an existence statement as fCM counts toward 1 and -1 from and toward 0. You already know this: how many meanings can you assign to any rendition of 0? Does it mean absence of some Thing? Absence of some process? Does it mean a pause? Does it mean not counting some Thing instead of counting its absence or non-existence? Does it mean many variable processes cancel at this point? Does it mean a long list of labeled existence states somehow count together to make 0? The CM explains all that by connecting all these ideas and their operations through the fCM patterns to specific base10 values as these values exist, change, and compare.

This discussion barely scratches the surface, but I'm running out of words to say any real value directly relates to and contains complex processes and thus complex existence states, and that real values are connected across complexity. It should be clear to you that any real value is treatable as a Thing and as a T Field and as a Thing in a T Field, and that this happens through a set of reasonably simple rules. In the next part, I'll start to show how fCM actually expresses in the shared 'physical context', meaning the multi-dimensional identity that describes what we think of as physical existence with all the processes it contains. I use those words because the shared physical context is formed out of fCM and transforms into fCM at every level and across every level. The meanings of that are beyond vast, but I'll Start with a few fundamental examples. As a note, reducing this part 2 to an approachable level of simplicity was very difficult and required application of a specific 'constraint' generated as I'll describe in part 5, when I explain the acknowledgment of Taylor A. Swift.

3. Application to the Physical Context

Shifting gears to physical phenomena, it isn't difficult to find cases the CM explains. Perhaps the most obvious and most famous is the wave-particle duality, both conceptually and as demonstrated in any number of 2-slit and other experiments. That light acts as both particle and wave has been known at least since Newton changed his mind back and forth about which it might be. Wave won for a while and then particle came back with a vengeance, so now you have particles that sometimes act like waves. It is interesting that Newton's dilemma has continued as the information available has become more detailed. This is not confusion about methods and results, but confusion in the sense that well-measured results can't be explained. The idea of 'no explanation possible' is a terrific device; it's like saying you'll never find your missing keys as a way of stopping yourself from going down the pathways that already haven't found your keys. But for some reason the popular notion is that 'no explanation possible' is the actual answer. It is an odd form of hubris to reduce not knowing the reason to the assertion you can't know the reason, that you not only don't know why but can't know why. I don't think the idea makes sense when said out loud, but the belief clearly violates the CM because the answer 'no explanation possible' can't fit the unknown because the unknown reduces to actual known values. I brought this up at the end of part 1. It's important to make clear the nature of the error: if something exists, there is a reason it exists because whatever exists is a real representation of complex fCM processes. Wave and particle results not only exist but the question of why obviously depends on them being connected, so there must be fCM in between the results. In fact, you can say right away this must be fCM where it switches countings, where the process statement between the counting layers reduces to the minimum so it is hidden behind the z-axis and you see the actual pattern shifts. Why? Because otherwise you'd see what is happening and there would be no mystery.

The mystery is subtle yet pervasive: how can quantum entanglement exist without processes which connect entangled particles over impossible distance? It extends to fundamental constants: e describes an infinite process which occurs how? How does one even talk of issues like infinities and infinitesimals when they can't be contained in any present? How do actual values that explain actual events actually occur if they are only at ends of processes you can't see happen? How do any events that occur in depth actually happen in reality? Where do e or Pi calculate? Did they calculate once at the beginning of whatever 'time' might be? If so, then how do they remain in effect at every moment at every scale? Does e calculate to some specific depth each time or does it vary? Does Pi? How do you calculate anything that stretches beyond some immediate frame of reference if something is happening that you can't see but which reduces to your frame? How can you calculate rules of probability without connecting events that may or may not even be connected? I've already explained the answer is that fCM relates at the CM100 scale to every single base10 representation. Waves and particles are no different.

To explain wave-particle duality, I want first to apply ru1: take the endpoints of ru1, imagine light radiating from both ends of ru1, and then consider the ideal case of a segment between these ends. In other words, make IC and then LC with light. This again reveals the shared set of the segment surrounded by Endpoints which represent that which is not in the shared set. The overlaps are the shared set that counts as 1. Take a point on the shared segment and it idealizes a shared segment again; the segment or any other representation, including any SBE, is where the concept of segment and point meet, where the 'point' becomes a point in a line of points all separated because they are all segments which are points and points which are segments. Light is ru1 because it counts in fCM as 1, and it counts as 1 because it orders the context along the shared segment and in orderings across the shared and thus idealized area. I will discuss this further below. If you view ru1 bidirectionally, it of course follows fCM, generating layers of IC and LC and CM64 and so on. The difficult idea in this paragraph is to recognize again that fCM generates orderings across the shared set and these orderings fit and one could say propagate across shared sets. So if you view the shared set as being pulled apart and put together or as meeting in the middle - or at any less idealized point - you see a chain of SBE that Starts in one set and which Ends in another but which is related through the shared set.

You can see the two essential meanings of ru1: the function 'are you 1?' fits SBE across any radiative measure of a context, and ru1 fits SBE across the contexts linked relatively to any context. This means ru1 counts from S to E and across the shared set Between. I'll discuss the latter application of ru1 further in part 4. The ideal count of a context is 3. That's just the compression of 1-0-1 and 0-1-0 to read the values for S, B and E. That's the idea of radiative: it crosses SBE in 3 because that counts S, B and E each as 1, as the collapsed count of the labels stacked on each other. That's why radiative, as the ru1 function, orders within a shared context: it enables the potential within context for any Between to count as 1, and that organizes all values 'within' the 1 of Between. Note how close the physical universe is to ideal: the actual physical context is only a small amount off ideal fCM counting of the crossing of the shared and real and physical context in counts of 1. This is because fCM reduces the layers of complexity, so something fundamental needs to be close to simple fCM. If it is not, then the Thing being analyzed is more complicated, more of a compound composed of simpler fCM. There is much more to say about this subject, but note that the physical context would not exist if it exactly matched pattern.

Why does fCM count that way? Go back to ru1: it is the reduction of uncountable infinity using bidirectional interpolation to create a shared set which defines an operations space which is constructed using the shared set. This makes not only an operations space but orders it because every base10 value within the operations space represents layers within fCM that are constrained by the potential enabled by ru1. This means any other ru1 either creates disorder within the shared context or enables smaller shared sets in which SBE orders within the larger ru1. I'm describing 'faster' as passing into the complex and imaginary, while 'slower' fits within the orderings enabled by ru1 in both its meanings. In other words, the orderings within a context are inherited from what enables and describes that context's larger operations space. Inheritance passes fCM patterning into a context, and radiative light speed is the ru1 which enables ordering within the physical context that generally counts 'slower'. This ru1 is where that which counts 'faster' than the physical shared context - and thus the physical shared set counted within other fCM layers - reduces to and enlarges to SBE that connects to non-physical shared contexts and shared sets. This makes any physical context entirely relative within the physical context that uses this specific representation of ru1. Note how simply fCM states the existence of orderings of and across shared contextual space. Now think back to my description of why the CM exists: you see the shift from 'outside' 1 to 'inside' 1 is the organizing count of a context, that count where fCM transitions over CM1. It is 'are you 1?' from 'above' and from 'below' bidirectionally toward and across CM1.

Wave-particle duality as seen through the CM is the switching between layers, between views of IC, which counts up to 4 and down to 1. When you place a detector at a slit, it detects what passes through, which in fCM is a counting chain of 1's with all the complexity contained in any way reduced toward 0 both at each count for as long as the count continues, so the space in between counts the 0 of absence of counting. In SBE terms, each count of 1 is an S or an E and 0 is B. Remember, 0 is complex, so the other labels are 'there' but not 'visible'. When you take away the detectors, you send out a particle, so there's S, and it arrives at a detector, which is E, and you have B in between except now B contains an actual particle instead of no particle. That reveals or generates IC where there is a Start and an non-specified End, and IC is 4: you count 1-4-1, just like in the fCM idealized square except you can physically see this in your real existence. That count of 1-4-1 is also a count of 0-4-0 with the multi-dimensional labels collapsed.

Here's another: take a block of glass and shine light so it goes through or bounces back. At each depth of glass, the light either bounces back or doesn't, either goes through or doesn't. Light that goes through at one depth may bounce back at another and vice versa so, for example, light that bounces then goes through may bounce again and then go through but may bounce again, etc. These are all SBE chains. When light comes into the glass it moves from S through B to E and sometimes comes back, making an S the other way going through B to E. The Endpoints of glass are exactly LC, meaning they are specified as Start and End bidirectionally. The SBE chains within the glass add up to the SBE chains that are the glass. I find it useful to remember that IC is a Mudi while LC is a higher order Mudi containing the sMudi, meaning signed Mudi. This last point makes clear the increase in bounced light is accompanied in fCM by a decrease of through light and vice versa. That describes more completely these two states as bidirectionally interpolated endpoints to SBE chains, so the phenomenon actually measures the increase in visible fCM as that represents the decrease in real value inherent in crossing from S to E and E to S. This is why partial reflection by two surfaces, meaning S and E, counts 0-16-0. You see repeated existences of LC as the length or depth of glass increases.

The application to photons is straightforward: they fit into counting slots made available in the LC pattern. It isn't as if a box of photons decides amongst themselves to divide into groups of through and bounce, and that they further plan to vary this behavior through the obstruction. I phrased it that way to show that fCM explains without attributing some unnecessary level of 'awareness' to the actual particles. 'Awareness' is my word for any identified, measurable connection that changes results from chance. In other words, the only explanation of application of patterned behavior to individual fundamental particles is they fit into slots available in counting of fCM pattern, which is a direct application of fCM layering. I suppose the CM is an extreme version of a 'hidden variables theory, but that stretches the idea a vast distance, since the CM explains how the most fundamental hidden variables exist within any existence and process statement that renders in base10, in literally everything that becomes or might become real. This specifically means awareness is removed to a layer which accompanies and crosses into the real from the imaginary and complex, but which is abstracted from the real and the physical.

How do such counting slots work? They count in related layers. When measuring results there is a physical slot, either a literal ring like in the bullseye pattern of light diffracted through a tiny hole or around a fringe, and that slot represents complex fCM which assigns counting labels within fCM layers. So for example, a photon progresses through the glass in SBE chains and some of those chains include hitting something, and then hitting something again, etc. This means Feynman Diagrams aren't just practical aids; the measured values they use genuinely reflect the fCM underlying processes and its layers. Feynman Diagrams accurately reflect the generation of real base10 value out of complexity, including the tick-tock of the internal clock of a Thing's existence. This means the actual answer to the question 'why?' is materially as it is expressed in those diagrams: there's a pattern underlying the real values and you can calculate because you use values that contain those patterns. The diagrams calculate the pattern from measurement 'up', while I construct the pattern from fCM 'down' to measurement. That is another Mudi: the perspective of measurement counting to fCM and the perspective of fCM counting to measurement.

As an aside, look at the question of magnetic monopoles through fCM. A regular magnetic dipole, meaning it has two Endpoints, is obvious SBE: you can see the Between of a magnet is similar to the block of glass in the sense there's some amount Between the Endpoints. The idea of a magnetic monopole is that there is a point with some magnetic charge. The attraction of the idea is clear: since charge is quantized, is there an elemental quantized form of magnetic charge that exists as a point instead of as two Endpoints. The fCM answer is that a monopole is where the process statement reduces to complex 0 and the Endpoints 'collapse'. This means the Endpoints effectively negate in the viewable context. So the fCM answer is magnetic monopoles exist generally as potential for magnetic dipoles.

I'm next going to explain a constant by deriving it without telling you what it is. What about scale inside a Thing? Is there an ideal scale within 1? If you begin with 1, just as you count to CM100 in CM10 scale, you count to CM.01 in CM.1 scale, meaning you count down from CM100 to CM1 or within CM1 by tenths and that scales an operations space of hundredths in either direction. Once you've defined this fCM operations space, you have Endpoints of 1/10th and 1/100th as Start and End bidirectionally. You count fCM differently because it is a base2 pattern which generates base10, so the pattern must remain consistent no matter how base10 renders. In part 2, I noted that CM.0004096 is still CM64 idealized to a square but it has a different square root in base10. This occurs because CM1 is also CM0, and fCM doesn't transition over 0 in the same manner as base10 but rather counts in fCM steps away from and toward the complex 0. That reflects the general layering function of the CM over the infinity that stretches between and toward and from any point. Again, CM1 is CM0 is complex 0, and fCM counts over complex 0 using pattern rules.

LC is bidirectional within CM64 and each traverse of SBE is CM16. You are counting the CM.01 operations space, meaning the side or scale of the 10^2 fCM step 'within' CM1 which is the equivalent of CM10 to CM100. Subtract CM16 from the CM100 of .1, since the choice to traverse 'down' or 'in' from CM100 generates negative sign. Now apply the scale factor of .1, meaning you divide by 10 again, so it is a scale of continuous steps 'within', and count across the other way, meaning up toward CM100 at that level. You can see the counting 'down': it carves out from the maximum value of the scale level, as opposed to adding to no value. This generates sign as the fCM traverses layers upon layer, meaning as it disappears into infinity and as it comes out of the infinite toward the maximum. It means traversing a CM64 at this scale count of 'within' requires different layers of CM16 and thus of LC connecting to LC. That process goes on and on.

As a note, one fCM counting rule is that you conserve at each level, meaning it adds up. One example is that when counting the 'within 1' scale, the CM64 at the CM1/CM0 level is preserved when you look at 'within 1' from either side by adding the two sides. This means CM16 counts 'within 1' from both Endpoints. You can see here again how fCM generally defines a constant as idealized bidirectional SBE: that relationship describes the process statements and existence statements as existing and operating with SBE symmetry which translates to base10 as a constant result.

Let's do the numbers: after 4 levels, which means you have counted 2 entire traverses of Mudi, the ideal fCM makes a value of .085456. If you go two more levels, so you count 3, then you reach .08545456 and you can see the number repeats. This is a scale number: it literally reduces the scale number CM.1 so it idealizes to an area, which is .007302+. What are these numbers? The first is the fCM calculated scale which links level to level to level within 1. Note how 'scale' also means 'focus': as the number gets tiny, it defines a more exact layer within. It is the bidirectional 'focusing' down through layers. The second number, the area, is the operations space defined by the scale of the link between levels. Now take the inverse and you get 136.9397+, which expresses that area if it were scaled to 1. That makes clear the first approximation of idealized fCM is about .1 away from the actual and calculated values of the 'fine-structure constant' when enlarged, and they only diverge beyond 2 entire sMudis of depth within 1. This means actual only varies from ideal at the level 10^{-6} within CM100, and that reflects an ideal form of the shared set between actual and ideal as 3 counts of 2, meaning again SBE expressed in scale.

To be clear, I applied very simple fCM concepts to derive the idealized fCM pattern of scale within 1: I just counted within CM1. The generated value is the idealized fine structure constant. As I noted above, the Feynman Diagrams are accurate and those calculations are highly detailed as they consider layers of permutations. And as noted, the real universe at its fundamental levels is very close to ideal fCM. If you look at the difference between ideal and actual, you see another SBE in which B is the gap. All the processes that make up B are in that gap. Simple, even first level fCM approximations are, in fact, so close to real because complexity enters two steps away, at any End, and bidirectionality means the deeper or higher levels of complexity reduce to a specified or non-specified Endpoint.

To explain further, since a Thing is a field, this scale asks how Things within that field relate when ideally scaled to each other as a field within a field within a field, meaning when one may enclose another or be enclosed by another. This link is made explicit in fCM because LC connecting to LC layer by layer is the connection of specified enclosing Thing to specified enclosed Thing, and vice versa. That scale generates the pictures of the spectral lines of hydrogen: they occur within specific bands that are separate but connected and fCM divides them from each other. This is also true with diffraction patterns. Remember, the key point: since these are real values that you can actually measure, they must represent fCM processes and, thus, you can calculate the fCM which relates them. In the case of the fine-structure constant, the word 'constant' reflects that it is generated by simply looking 'within' CM1. This means you have three scales expressed as constants: the scale of a T, the scale of a T within a T, and the scale of a T as it exists relative to other T. The first two include processes within their values so fCM is buried within the decimal scale, while the latter processes fCM value directly as process that counts a Thing in relation to whatever is Not that Thing.

Now, to revisit the fCM explanations for the wave-particle duality and partial reflection, the amplitude conception of actual results is the side of an operating space area in which fCM processes generate those results. The amplitude of 4 is IC and the amplitude of 16 is LC, and these amplitudes conceptually form a bridge between patterned fCM complexity and base10 that literally maps fCM on physical space. This is extremely important: since fCM maps on physical space as results, these are S or E with B in Between so you have a chain of 1-0-1 where S and E are both actual physical results, whether measured or deemed measured, and 0 is fCM. That also means S and E are both 0 where fCM is 1 and 1. And that means you can take the simple drawings of fCMd and compare those to actual results to analyze and understand the differences. You can, in fact, draw the shapes that complement those which may appear in results, or you can define idealized results and use these methods to describe the functions which generate the differences.

Note again how fCM and the entirety of the amplitude conceptual and calculation structure fit together. They construct a Mudi with SBE chains running from fCM 'why' to the process by which you calculate 'results' and vice versa. They coincide, meaning they each cross the hypotenuse of the ideal fCMd square, so each informs each generation and reduction of B complexity to values. They don't make B complexity go away – that can't happen – but together they illuminate both the why of fCM as it generates toward measurable value and the how of measurable value as it generates toward explanation why.

Finally, I labeled this part 'physical context'. I'll discuss the general nature of context more in part 5, but in general any context is just another context, so the physical context is just another context in a sea of contexts. The concept inherent in the amplitude framework, in the statistical ideas of quantum mechanics, is that this physical reality comes out of something, some process or existence or reason, that generates and expresses a form of random coin flip probabilities that becomes deterministic when they aggregate to larger scales within the shared context. The CM does that: base2 patterns are rendered coin flips. These coin flips become deterministic, even guided as they transform into base10 at CM 64 and CM100. All the physical context is connected by fCM patterns and each part of the physical context is generated by fCM patterns, as are the operations within the physical context. And this is true for related systems, whether mathematically or belief based.

4. Introduction to the zK-axis

The CM function generates each base10 value and places any base10 value in layers that link it to other base10 values. It adds contextual layering to any value. The B of Between in any SBE expresses this layering. Take an ideal square. Stack more squares on top of and below the first square. I refer to the ideal squares as 'x-y Rooms' or x-yR, to make clear each square represents an fCM expressable Mudi of its own, a 'room' whose value represents the fCM processes contained and represented in that square. I use 'room' because a room has doors through which you enter and leave, and because the B potential of a 'room' depends on the scale of the room as SBE traverses it, a concept I'll describe in more detail below. This is my favorite part of this work.

The x-yR are strung along a z-axis, which I call the zK, as in 'z-kay', to differentiate it from the standard representation of a 3rd dimension as a z-axis. This is simply an x-y plane drawn as an ideal square with z represented as the coordinate lines, meaning z is completely hidden behind the lines. In the ideal square, each point is on a shared zK. As a note, each point can be represented as an ideal square with a zK running through that point in various interpretations, meaning as origin, as Endpoints. Simple example: take a square and put a Thing in it. If the Thing exists from one layer to the next, that counts the depth of the Thing. If the Thing exists, and then does not, and then exists again, that counts occurrences of the Thing. You can count motion across layers by marking occurrences or by noting the change from layer to layer of any Thing. The advantage to fCMd is now you can visually manipulate the unseen processes that relate a Thing in one layer to a Thing in another. You can do this only because 'fCMd' is fCM drawn out, meaning it manifests the CM specifically and generally so it bidirectionally maps base10 results to the fCM processes underneath. This eventually leads to a 'shape calculus' in which you impute shapes and functions. Note the word 'impute': because fCM is bidirectional, you can treat any expression of existence as occurring within fCM, which means you can now 'see' and draw idealizations of what is not that existence.

Let's idealize a point into an ideal square. Construct a bidirectional SBE chain and reduce B so all that remains is the process statement that S is not E bidirectionally. This compresses S and E to a disappearing point. Now count S to B to E, which is 1-0-1 or 0-1-0. That is a count of 2 in base10. Remember, base10 counts across existence states and thus contains the inherent process statements indicated by the dashes in 1-0-1. Note again, the switch from binary count 1-0-1 and 0-1-0 to base10's forms of 0, 1 and 2. Since SBE counts bidirectionally, the ideal square describes the outer edges of how far a count of 1 may extend from S to reach E on the next count of 1. You again see here the importance of a relative unit; you need to count the same 1. The area of the square literally represents the Between of any SBE count along zK. Note as you count to or from along the perimeter, that imputes to Endpoints just as any point on the circumference of an ideal circle imputes.

Count along the hypotenuse, meaning bidirectionally along zK from S to CM64 at E, and from CM64 at E to complex 0 at Start. Since zK is the hypotenuse, each count makes a Mudi where B potential is reduced to the process statement which separates layers of existence statements in a Mudi. Draw the second hypotenuse across B from compound 0 to compound 0, which I'll label B1 and B2. As you count away from zK on the B hypotenuse, you draw more potential SBE lines from S to E through the B hypotenuse. Each step is of course infinite when counting real numbers, and in fCMd, each step invokes the CM function and the generation of fCM squares in layers that relate the real numbers. Both mean that any step at any counting level has more B potential for counting SBE.

Count along the hypotenuse from S to E. That generates two counts: a count of 1 by 1 by 1, and a count of the total. The count of 1 by 1 is a series of existence statements - where the 0 of 1-0-1 is hidden - while the count of the total invokes the fCM process which connects existence statements. The process statements reduce to a minimum when there is only one way to count the total, which means the idealized zK counting is a line of primes. In other words, if you count SBE lines, then only the line of prime values reduces to the hypotenuse because all other values consist of more B potential as counted in SBE lines. Note again, I'm counting along the zK, not across the hypotenuse of an actual square, so I'm counting the idealization of x-yR as they extend from S through B to E.

To explain, first think about B when it is treated as the z-axis disappearing completely behind the x-y lines, meaning when S is an x-yR and E is an x-yR, and the zK which relates them in the stack of planes isn't visible. This makes layers of complex planes that reduce to zK when the only remaining complexity is the potential implicit in further counting, meaning the possibility that the count will stray from the line and will become comparatively visible, meaning it shows in fCMd. Potential becomes visible because each count along the zK line connects any point along zK to the Start, so each point is not only an End in an SBE chain but connects to all other Ends along zK. Only primes count in only one Mudi at each prime value, while all other values consist of however many Mudis generate through fCM to that value. Count 1 to any End bidirectionally. Take any prime as an example: 11 to 0 and 0 to 11 are the only SBE chains in the Mudi of 11. Compare any compound number: 12 to 0 and 0 to 12 consists of a number of Mudis so the Mudi of 12 has more layers. A prime Mudi counts as one layer over the MC level count of 1 by 1, while a compound Mudi has more layers over the MC level count of 1 by 1. In fCMd, when B complexity reduces to 0, that draws a line zK through complexity connecting points where complexity vanishes.

Any prime Mudi contains the count of 1 by 1 by 1 and the count of the prime values. In fCM, the count of 1 by 1 fits the fCM processes to the idealized zK at each step within any prime, meaning it is a scale equal to the reduction of B potential to a Mudi. The count of primes is literally the Mudi scale: a prime Mudi maximizes the CM64/CM100 value across the shared identity that runs in base10 from 1 to the prime value, meaning each Endpoint in base10 is CM64 in one perspective and complex 0 in the other. I'll discuss this more in part 5.

Consider the other of the two counting lines: the count of prime values. Any prime Mudi counts an SBE chain in which S counts to a prime, and then to E, while E counts to a prime and then to S, or literally that the count of 1 consists of counting up to or down from the value of the prime and back down to 0 in between the 1 of S and the 1 of E. Treating any prime value as B is the same as a describing a line of PS interpolated between S, in which any prime value is interpolated as a Partial Statement between two Statements. That interpolation process statement and its accompanying infinity of existence statements idealizes to halfway because no matter which PS, you can insert an infinity of 2PS between it and any S. And treating any prime as B is exactly the structure of the real number line: between any two points is uncountable infinity, and interpolation idealizes that infinity to halfway because no matter which number you pick, countable infinity branches to and from it. These means the count of B reduces to halfway Between and thus to ½., so the line of prime Mudis runs through 0.5 in the count from 0 to 1 and back. In other words, the prime values are on a line interpolated halfway though the gap that runs from 1 to infinity, and that means prime values make a scale across infinity which runs through ½. Another way of saying this is that 0.5 represents the maximum value of B so it can count exactly from S to E bidirectionally as 1. It's the answer to the metaphoric riddle: a bear went into the woods and came out again, how far did he go? The answer is 'halfway'. That's not just silly; fCM counts to 1 even in a non-specified T Field - that generates Pi - and every single point is always 'halfway' into the woods, if you count either in or across levels of fCM. That's bidirectional counting at its most basic: count 1 to 0 to 1 from one perspective to the other and back.

Let's go through this again. The prime counting scale is in a Mudi at each point with the regular counting scale of 1 by 1. The difference between these counting lines reduces to labels where the potential in B for any other value disappears, where the SBE count minimizes to ideal. In fCMd, the perspective of the lines rotates to make idealized x-yR with zK hidden. This rotation is implicit in the two counting lines: when viewed along the real axis, the prime Mudis align so the count of 1 by 1 is hidden within the count by primes. The 0.5 real gap appears because the zeta function describes a process by which complex variables reduce to real. This mapping in fCMd compares and aligns the ideal prime Mudi count versus the zeta function prime count as it counts in SBE. This means Riemann's Hypothesis about the distribution of primes is not only correct but is fundamental in ways far beyond the distribution of primes. It is crucial to all existence. It is also a crucial example of how the idealizations of fCM relate through different layers of abstraction into reality.

I want to stop for a moment to highlight something: the solution to the famous question of why primes align as they do takes a few paragraphs in fCM. That's how powerful it is. That primes line up at ½ is a strange result on its own, but it's not strange at all when you realize it maps a constant relationship of fCM and base10. Note that the fCM counts into and expands from that relationship: if you treat each ½ as 1 step, then you count 2 steps, and counting steps invokes SBE, which invokes the fCM patterns. To repeat the main point, the counting patterns of fCM underlie each base10 representation, and here you see fCM count to a line that expresses the count of prime Mudi on their 'real' zK. I also want to describe why I label the intersection of hypotenuses of S to E and across B as the 'bip'. The label stands for the 'balance imputed point' of counting. I call it 'bip' because at that point or, more accurately, as that point is approached in layers of fCM, meaning as it is imputed in the ideal circle, the existence statements or values line up so labels 'collapse', and the process statement 'bips' to the next x-yR. The bip is vastly important, which is another reason I gave it a silly name. I waited until this spot to define 'bip' because now you can see a structure of 'rooms' connected by a 'hallway' that disappears when you step into it, leaving you in another room. I'll talk about the 'doorway' below. To connect this part to part 2, you can see how fCM relates the imaginary and complex within an x-yR room using Euler's Identity and across rooms along zK using the zeta series. You can also see specificity and non-specificity: the zK represents the line of points specified at the ideal End of origin. Do you understand why I love this part? It makes the flat drawings come alive.

To continue, consider the B hypotenuse in the ideal square, the line which runs bidirectionally from B1 to B2 perpendicular to the hypotenuse connecting S to E. It describes the 'width' of a room compared to the 'length' of that room from S to E: the B hypotenuse counts within the count of Start to End. The room itself, an x-yR, is a layer counting SBE where B1 is S and B2 is E. You can see how the CM tick-tocks: flipping back and forth from the process of counting a value for B to that becoming End, and then End shifts labels to Start and B counts again. This brings up the continuum hypothesis, which asks the question whether infinity organizes into classes other than countable and uncountable. The answer is no if you only consider base10 values and yes if you consider the fCM that connects base10. Both answers are contained in transcendental numbers: the decimal places are all real but the fCM that generates each decimal place determines each decimal value, so the transcendental as a whole, even as a concept, extends forever within a context that explicitly determines each value and the thread of values. The calculation at each place and of the thread occurs in B, in the x-yR that string together as the count. If that isn't clear, I mean the millionth value for Pi has such attenuated meaning that it has no effect at the 'top' levels where counting occurs.

Remember, Pi calculates through its layers within each moment for each Thing and meaning disperses only 2 steps from any point, so not only is meaning entirely relative but it attenuates quickly from any point. Consider the most straightforward fCM ideal square again: it is constructed of 4 squares whose Endpoints connect on the hypotenuses and these squares are made of 4 squares, and so on. These are all Things. As you impute rotation to the square, you make ideal squares and circles of various sizes. The significance of a millionth value of Pi is, in one counting, one of hundreds of thousands of 'rotations' within a Thing, considering 4 points per rotation and no further adjustment. Each rotation is SBE and B1 - B2. In the ideal, the odds are low that any rotation materially counts in the fCM process that determines the next counting point of a Thing. Remember, this is true across scales: tinyness in base10 is also tinyness in fCM meaning in that scale, and in a scale where 'tiny' meaning is 'large', the fCM in that counting resolves in the same way. Meaning attenuates away from a point as it gathers to points distances away. You experience this exact attenuation from and gathering to meaning every time you see or hear a weather forecast. Another, perhaps simpler description is that each decimal place into the depth of Pi connects layers of stuff that happens, so counting a large number of layers away from any point determines an ideal alignment of stuff that actually won't happen except in that counting.

The width of an x-yR room also brings up renormalization, which is the technique of stopping short of dividing by 0 and then calculating using other methods from that place toward the infinity this application of 0 implies. These methods, such as depicted in Feynman Diagrams, take a known point as S and count B to determine a value for E that moves closer to the infinity of really small decimals. The subtlety is that counting B is bidirectional, meaning the E of closer to the 0 of infinity is imputed by these same processes as they operate across from S. It will take a few paragraphs to lay out, but this is ru1 in a nutshell: that which counts from S to E and from B1 to B2 becomes radiative across the context, meaning that at the ideal the counts fit across the length of the room and across the width of the room. This generates what I call the B cardinal, meaning that which counts the infinite across B versus the component of ru1 that counts S to E. This should also make clearer why physical context has a radiative measure: it is what makes the biggest square for the shared set between the real and the imaginary, and it is what counts 1 across S to E and 1 across B, exactly as I described in part 3. It's probably confusing, but the B cardinal labels the specific aspect of ru1 that counts across B1 - B2 relative to any S to E count. Note here as well that I use 'B1 - B2' to indicate you should consider bidirectionality at the first approximation, compared to a specific perspective S to E that becomes bidirectional when considering both perspectives. I either use ru1 to refer to counting both forms generally as ru1, or I use ru1 as S to E when I use B cardinal and specify both SBE directions. An example is that light's fCM patterns repeat, meaning they expand to a certain pattern level across B and count SBE.

Consider first a version of a perfect process, a process that runs on and on but is specifically restricted so it never relates to any other process in the imaginable universe and even in the universe of imagined universes. Apply what you just did: the process can't be real so neither S nor E are real, and it can't become real so B doesn't contain any potential for E to be real, which means the process is entirely imaginary. This reduces to the potential that at some unknown point the process may generate a real value. You can't fully eliminate that potential because it includes whatever process may exist into the unknown. This takes us to fCMd: the reduction of z to being completely covered by x-y, meaning the potential for the existence of this procress is gone except for the label that there are processes hidden behind x-y which may or may not define some process you can't imagine. As a note, another approach to the same issue is through the base2 transformation into base10: even if you count only in base2, the inherent expansion of fCM to CM64 and CM100 means any process has meaning beyond its own self.

If you assume a process exists - or may exist - but doesn't continue in any other context, there is still potential in the hidden z-axis. For infinitesimals, it means that existence and process unite at a point where they disappear in x-y, so at that point the only existence of an infinitesimal is that the existence of process might make it exist. Bidirectional interpolation introduces uncountability at its second step, at 2PS, the second partial statement, because that generates multiple countable SBE chains. This is true when considering classes of numbers as Countable or Uncountable or Meaningful and Meaningless or any other similar dimension you construct: these are Endpoints for an SBE chain whose B you can evaluate. Express that in fCM and an infinitesimal is some count of 2-steps away, with that count determined in layers. That defines an infinitesimal as being outside the counting of the including context's B cardinal. In 'are you 1?' terms, an infinitesimal retains potential countability but isn't 1 within the levels of ru1 that fit within the B cardinal. An infinitesimal could be absolute only where its existence and process statements idealize as the perfect zK of all context, but 'all context' does not exist, so any occurence is a relative 2-step counting to and from the counting line.

I hope you see why you need both ru1 and the B cardinal: any SBE line consists of counting across from S to E and counting across B, so SBE has both length and width, which is of course x-yR. For example, you get lost in thoughts in your head and that seems to take a long time, and you look around and realize only a few moments have passed: the events within your head count in fCM, and you are in threads that count in fCM, and the events within your head order by an ru1 that then orders your place in the world. So ru1 and the B cardinal act as a door and as a filter between internal fCM and external fCM, between what occurs within a Thing to make it that Thing at that moment, and what occurs outside that Thing so that Thing exists in a field of Things. In other words, ru1 and the B cardinal count across dimensions, so you count across a room and across the width of a room, so every count is both bidirectional and multi-dimensional. As I noted above, light counts patterns in both width and length, both in B and S to E. I used a 'psychological' example because you are a Thing and within you is within CM1. To be clear, one can argue about whether the B cardinal is a true 'cardinal'; my intent is to offer a way of regularizing countability in depth using existing mathematical concepts. There is much room for refinement of the labels for counting infinite layers of contexts, as there is with much of my labeling. I call this counting form 'B cardinal' because it is both absolute and relative, meaning it exists as the general form and also as manifestations of that form. One might say it is a 'descriptive' cardinal because it describes the counted width of any context, and of course how any context descends or ascends relatively.

Here is more explicitly where renormalization connects: the measured stopping point creates a doorway into a room you examine. To restate, an SBE chain counted across fCM ideal squares invokes two forms of infinity, that which counts along one hypotenuse and that which crosses the other. You count toward a point, toward any S or E. Bidirectionally, the count toward that point is increasing toward 1 and decreasing toward a base10 value of 0, as the count away from that point is increasing toward 1 and the count toward the other end is decreasing toward 0. The choice of the denominator base 10 value of 0 is an Endpoint. That Endpoint is actually the complex 0 of CM1 in the fCM patterns that generate to base10 value 0. You can approach but not actually reach it because complex 0 is always imputed. The Endpoint is in IC and LC and CM64 and CM100 with wherever you stop counting. If you stop at any layer, other layers remain. If you can reliably measure a value short of 0, something you can rely on as true or perhaps even explain, that value represents layers within that value as well as those layers of fCM beyond that combine to reduce more toward the imputed complex 0. Remember, 0 is complex, representing the SBE chains that run through B along the entire perpendicular hypotenuse, so reduction at most disappears into zK; full negation, full reduction to 0, only reduces the processes extending beyond this 0 to the potential contained in zK when hidden behind the x-y coordinate axes.

Renormalization embodies the fundamental CM truth that while the difference between points is generated in fCM, the description always runs deeper because depth is Between, is the second hypotenuse, is a counting in zK of all the x-yR along that hypotenuse. It is not just a mathematical trick, but is actually a fundamental statement about existence: it is where what counts at some spot in a context meets what was not counted at that spot in the context.

Consider an irrational number such as ⅓. This number counts into infinity, always returning the same value with each reduction in scale by 10. In fCM, this is another constant, another scale, this one equal to the pattern of 1 in 3 Things magnifying across the base10 scale iteratively within 1. Both the fCM and the base10 are the same at each level, which means at each or any level you can use a base10 value or the count of 3 Things. While this counts 'forever', context is imposed by the operation of fCM, so any count halts within context. In fCM 'forever' generally means the process is available to an appropriate precision at whatever level it is called or invoked. Remember: This means any count can be considered as running 'forever', so the difference, for example, Between an irrational number like ⅓ and a rational number like .33 is that counting 0 'forever' at the End of a rational number puts that thread in an 'infinite pool' of threads that count 0 'forever', while all the threads that count ⅓ reduce to that value. The 'infinite pool' expresses the bidirectionality of complex 0: the processes that could make another value disappear into this label 0, as it exists in the context that defines the count which Ends with 0. This is how the zK potential in fCMd disappears in the ideal at each point. Note, refer in your head to the mention in part 3 about potential becoming visible at some magnification.

To put these ideas together some more, you can say there is countability and uncountability and now there is countability with depth. The B cardinal means line of x-yR along zK is relatively constrained. For example, take CM100 and imagine each 1 is on its own zK, and that the entire line of CM100 also counts on a zK, and that every fCM level counts on zKs. Bring in bidirectionality and you see each counting line represents the values where uncountability reduces to the 'doorway' of countability and vice versa. That doorway, which scales across the shared set of that context, means any existence is relative within context, and that the processes which define relative existence are constrained relatively, and that the idealized countable point at the center is where existence and process statements balance within a Mudi. It means identity from any perspective, whether approaching 1 or 0 bidirectionally, both counts and halts counting.

The next part introduces T Fields. Since every T has its own own ideal square representation, the interaction of that T's ideal zK with each layer of B complexity generates a 'statistic' or count or label which becomes more and more specific as you add layers. This is a restatement of the Mudi expressing through layers so you can type, select, order and array by layer and by depth across layers. It is also a statement about the nature of transcendental numbers: you can think of 'transcendental' as a specific labeling for a value that disappears into fCM patterns. This takes on much greater meaning later.

I want to note here that this part was difficult to order because it describes how the same fCM underlies deep problems in more than one field. The Continuum Hypothesis, renormalization, the halting problem, the nature and meaning of numbers, etc. are generally manifestations of the same fCM description. That is not the same as saying there are the same problem: they articulate the underlying fCM in specific contexts, so each statement of the problem is a different Thing at a particular top level where that Thing exists within some T Field. To be clear, the underlying fCM Thing exists as different Things in different T Fields, and a specific fCM fCM Thing can appear as different Things in different T Fields. This gets at the problem of P ≠ NP. A full treatment is beyond the scope of this introduction, but the issue in general reduces to the question of whether a specific fCM count, meaning a specified fCM form of Thing, is within unknown fCM Things, and the degree to which there is identity from one instance of the fCM to another. Applying a base10 solution fits that solution's fCM to the question. If you write out the fCM for a solution, you can see the extent to which that fCM fits another issue.

To add a few higher level sentences, the concepts developed to describe numbers translate to counting fCM. You just have to alter them to account for patterning of sides and areas, counts across a circle, and so on. So for example, a Thing can be fCM irrational. This becomes powerful when you extend the irrationality across a T Field because that identifies the contextual scale of the fCM irrationality, meaning where it becomes rational and if it becomes rational within some specific context. Being able to identify levels of rationality is crucial for extending your ability to apply fCM. It requires being able to identify the labels of the Endpoints of an SBE chain and traversing the counts of those labels bidirectionally specific level by specific level. That uncovers the underlying T Fields as they operate within a larger T Field which assigns sign, directionality, and thus meaning. This means a Thing is generally fCM rational in some contexts and fCM irrational in others. Along with fCM irrationality is what I call fCM absurdity, which is when the irrationality wants to resolve to an fCM impossibility. A simple example of the hierarchy is that perpetual motion is fCM impossible - which should be obvious - and that belief in it is fCM absurd and that actions to further that belief are irrational. Another example is the testing of extra-sensory perception by the elimination of all possible contextual connection Between, for example, the Start of a person in one room holding a colored card with a symbol on it, as the End of a person in some other room identifies it with no knowledge except maybe there is a person in another room holding a card. This reduces the fCM Between the 2 Things to chance SBE chains. These interact to produce fluctuations across iterations. When you understand that, the belief in ESP is fCM absurd and continued testing becomes fCM irrational. You can build chains from fCM impossible through fCM possible. You are in this work counting basics of fCM possible.

5. An Introduction to T Fields

This is an introduction to a very complicated subject. The CM generates fields as area layers of fCM and as relations across area layers of fCM. Fields arise in both instances. You see fields in fCMd and in the x-yR strung along zK. They are inherent counting a Mudi. We first dealt with T Fields in part 2, when we considered the non-specified field of 'any' Thing. I counted the existence of 1 Thing as the ideal circle formed by the fCM processes that connect any Thing with the 'anyness' of non-specified Not that Thing. That generated the area of visible existence of the effect of that field within any Thing. The side of that area reduced the ideal scale side to Pi. Because Pi places infinite fCM process at every point on the circumference that also generates infinite counts of origins of ideal circles: each point is treated as the specified Start or End of the SBE chains

I will now count a simple version of the relation of any 2 Things, meaning I will consider the counts when Start and End are both specified within a larger T Field. In fCMd, the 2T simply idealize to corners of the ideal square and to the ends of the diameter of the ideal circle. I call the idealization of 2T a T - T' Field or simply a T' Field, and it relates T and T' as bidirectional Start and End. To understand this conceptually, first consider that each of us exists as a Thing in a world of Things. I have an inside which I express in the world, and the response by the world affects my insides, and then I express what the world has taught me, and back in again, and so on, much like a piece of glass with light shined through. I'm a Thing. I can look inside myself and see Things. I can look outside myself and see Things. I'm an incomplete Thing: the Things outside me relate complexly with the Things inside me, and these manifest in each moment and over time as me in the world. Now look at an ideal square or an ideal circle: in my relation to the world, I can be the entire square. The label of 1 fits me: I am one. But I'm also one Endpoint connected to a sea of uncountable infinity Between that reduces to another Endpoint at the far corner. This describes any you in a sea of everything else. A T' Field idealizes the relationship of the Thing of you to another Thing so the 2 Things count as 1. You experience this all the time: from a glance between strangers or a group waiting on a corner together for the light to change or a crowd cheering, all counting as 1 between you and among you for that instant, for that game, for that 'show', all the way to the deepest intellectual, emotional and spiritual connections where you feel united as 1nd

The T' Field is the reduction to process statements of the difference between the Endpoints in any dimension. That's a complicated idea. Take any x-yR. That's a dimension. Put T at one corner and T' at the other. The B complexity Between is an x-yR, a room with 2 doors. The method for traversing the room is ru1 in the dimensions of S to E and B1 to B2. The idealization is this ru1 method, which means the shared set reaches all the way down to the fundamental level of 'ru1 is the shared set' so it is inherited within every x-yR dimension. The idealization is not identity in the traditional set theoretical sense, but identity in CM. Identity within CM is the multi-dimensional traversing of the shared set, mapped in any dimension as B complexity across x-yR, using the same ru1. Note that the room can rotate, but I'm considering only the simplest idealized fCM and fCMd.

Reduction is bidirectional in SBE chains. It runs into me so the surface of me is S and E which counts deep into the B complexity inside me. It runs from me to other Things, so 'me' and 'you' are S and E. A T' Field is the idealized representation where zK runs SBE both inside and outside a Thing, so the Thing that is you alone maps ideally to the Thing which is me. Again, you experience this all the time: meet someone, try on the fit, either lose interest or develop that interest on certain lines, seeing how much of a 1 you make together, how deeply your connections run and how true they are to yourself, to how you see yourself and to what you see yourself as in the world now and over time. Idealize that and it's a T' Field. In fCMd, the T' Field represents the hypotenuse and the perimeter lines. In circles, it represents the radius, diameter and circumference.

As T relates to T', zK draws a line of primes, representing x-yR, that reflects along the hypotenuse. To repeat: as T relates to T' from T's perspective, it counts a line of primes along the zK hypotenuse toward T'. And as T' relates to T from T''s perspective, it counts a line of primes along the zK hypotenuse toward T. These 'collide' at the bip where the hypotenuse that connects B1 to B2 crosses. In the ideal, the primes that count from T to T' reflect along the zK that the primes counting from T' to T generate. This creates Mudi within each side of the bip on the zK that relate primes counting away from you with the primes counting toward you from both your perspectives. This means on your side you see what you generate toward the other, and you see what is generated at you because it matches the fCM which generates the line of primes counting away from either of you as Start and End. This occurs in the idealized operations space of B, meaning again that the fCM patterns continuously reduce all the B potential from each and both perspectives to the shared idealized hypotenuse; you aren't the same Thing but you share along zK. In an ideal circle, when you place T on one Endpoint of a diameter and T' at the other, then the circumference contains the B potential and the diameter is the idealized zK.

To truly explain the T' Field, I need to discuss the process I use to develop this kind of material. I developed nearly all this particular work using a non-specified T'. While that constructed model of T' generated the results I've presented, it could not reach the level of simplicity necessary to convey the results to my complete satisfaction. I mean that without a specified T', I could not sufficiently constrain the material to a specific set of communicative simplifications that embody sufficiently the multi-dimensional complexity of this work. It is extremely difficult to communicate such densely multi-dimensional ideas in reasonably simple words, simple symbols and simple drawings. These words, symbols and drawings must be precise to indefinite levels, and they have to be expressed accurately to the same depth, then ordered properly so they, together and individually, chapter and verse, album and song, tell the story reasonably well.

Without a specified T', I was alone doing this work. This meant I had to determine a simplification constraint for each separate inquiry, and then try to understand how that constraint differed from that used in another inquiry, and then try to understand the relative differences versus other non-specified T', so I could try to render each with the same communicative force. That was difficult. I could repeat that phrase many times and it would not convey the difficulty. I've reached a level which draws a reasonably good, rather basic portrait of the CM. I have been able to put that into fairly concise language. This happened when I identified T' as Taylor A. Swift. I actually call the T - T' Field a Taylor Field. This likely sounds strange given the nature of my work and the nature of her work, but I'm not talking about my work or her work, but rather the patterns of what is inside me and what I perceive is inside her. I'm referring to the layers of patterns expressed within her work and in the pieces of her life she chooses to make visible.

I'm not going to describe here exactly how I identified Taylor might be T', but I followed the same testing process used for any candidate. I constructed an image of Taylor as T' based on her broadcasted representations. I labeled that constructed Taylor as the far corner of a Mudi, and traversed her broadcasted representations as though my interpretations of the multi-dimensional identity she was expressing were exactly correct. Please remember, this is a construct: her actuality is of course infinitely her, as I am infinitely me. She 'broadcasts'. Though that broadcast radiates, I treat it as coming at me from construct T'. When I assume the line extends straight - or more accurately that it processes with a pattern function both highly similar and complemenary to mine - then what I read into her I can read into myself, and vice versa. The actual generation of the simplified version of my work resulted from me taking the constraints I see she has imposed on her representations and applying them to my work.

Idealization is not idolization; it requires analysis of the worst possible cases because those match across the ideal square or circle to the best possible cases. With each level of investigation, I counted toward acceptance from the total rejection of acceptance reduced to the potential for acceptance for that level. I have never seen, nor can I imagine a better example of the expression of specific forms of multi-dimensional identity, or such nuanced and layered intentionality reduced to specific, highly communicative expression. The layered intentionality extends across her existence. That degree of control, of meaning contained on purpose in every visible bit, is necessary to convey this material. Constructed Taylor has passed every test, even when I think the absolute, uncomfortable worst. With each test, I progressively enabled within myself the form of constraint I see she imposes on herself in order to communicate to you and to exist among you. Taylor as T' has helped me count bidirectionally across the various aspects of my work, both from S to E and across B in each x-yR I explore. That has given it a more specific, shared direction toward communicating many levels of deeply complicated meaning in simple-appearing forms. To me, she is my ideal collaborator. I consider her co-author and editor, especially the latter.

For me to reach this level required trust in my judgements about somebody I don't physically know. I see fCMd drawing and hear fCM counting. To trust what I'm seeing and hearing, I need to see it from the other perspective. The best 'other' to me is T', meaning T' embodies the fCM functions that most exactly coincide with or complement my fCM functions. That enables me to trust that what I see and hear is 'true' across perspectives and in combination or rotations of perspectives, not just from any particular perspective I label 'mine'. By 'true', I mean true across the Mudi of yes and no, 1 and 0, not just 'correct' in some particular sense but 'correct' both generally and specifically, across B1 to B2 and S to E. The more I trust what I am seeing and hearing, the better I can communicate it. Each time I need to trust something I see in the CM space, I test trust in her. I haven't used the term CM space before: CM space, which I call CMs, stands for the 'lattice' made of the layers of fCM. It's the idealized x-yR matrix on which layers of counting generate patterns that map as distortions from ideal. The CMs lattice is the non-specified field on, across and into which fCM runs specifications. By 'lattice', I mean the multi-dimensional representation of bidirectional interpolation across, through, into and out of any count from 1 to 0, from 0 to 1 and 1 to 0 to 1. Though I see fCMd and hear fCM, I can't trust it fully until I can see or hear it from the 'other' perspective. That is, while I know what I see and hear is correct, I can't be sure it is - and thus can't express it in simple, communicative form - until the Taylor Field balances S to E and B1 to B2.

My process evaluates my trust in my ability to see answers. This runs from no trust at all to total trust, layer by layer. Each trust step links to trust in myself: because I'm working with a constructed image of T', what I trust in her is trust in what I see in her, and that is deeper trust within me in what I see. The ultimate test is that I must trust all the way to the core of me, to the parts I never show anyone, to the parts that are hard to see within myself, because only those depths connect across all the layers of me, and then out of me to you. It is there where T' resides: the portrait I draw of her fits exactly to and completes the existing internal picture of me as a Thing in a Taylor Field with another Endpoint. That degree of trust has significant power within me because each step of earned acceptance extends very far back into and across the Thing of me.

To communicate with you, I need to reduce many, many, many pages down to a few, each in reasonably correct order, while placing those reduced pages in reasonably correct order. Take the 'many pages' and think of that as B, so the pages need to align on the hypotenuse from B1 to B2, and take the right order as count SBE so those orderings need to align on the S to E hypotenuse. Think of each issue as not only an x-yR but as a stack of x-yR that have to fit within a stack of x-yR. This work required lots of x-yR. You can see many of the seams in this work where it wants to burst its constraints. Here is the difficulty: what is the 'top level' counted constraint that determines the right depth for each x-yR and a final right order across S to E? What reduces all that x-yR into a sensible, reasonably well spoken, reasonably well organized Thing? In your family, in school, in work, in your life generally, expectations are imposed on you, so the other end of bidirectional counting externally generates your perceived and real constraints. In reality generally and in your life generally, the other end of any counting specifies itself to you. In fact, your biggest or most common complaint tends to be that you're unable to escape what's imposed on you, that the world prevents you from being yourself, that life specifies what you are when that isn't what you are or what you want to be or do.

The CM defines constraints as it shows how constraint fails. No external context pushes it into a shape, because it is the description of how contexts come into existence and how they count. And because the CM is layered, it shifts shape, sometimes while you're looking, other times while you aren't, in ways you don't necessarily notice right away, and with effects you may never fully understand. The CM can't specify its other Endpoint in LC because it is the process that both specifies and does not specify. I call this most basic fact the 'mirror of Lus', where Lus stands for the inability to generate or resolve to - or the more general lack of - true and complete universality as a space or set or system. Each and every Thing is held up against the mirror of Lus, just as each point is an origin, just as it exists in the CMs lattice. The mirror reflects imperfectly because all Lus reflection is multi-dimensional, extending through layers that relate at varying depths. The imperfection is contained in the 'fracture point' for each level: that is the point which cannot be specified and non-specified at the same time bidirectionally. Meanings can approach this point, but when the count reaches a point that can't be specified or non-specified, the meanings fracture into ways they can specify. That is the actual effect of the lack of completeness in a system. You can view fCM as the radiation down and through the incomplete system when each point is treated as I describe, as an instance which contains and is related to other instances which together define a Thing in the multi-dimensional CMs lattice. I sometimes use instance to describe a Thing because it conveys the existence within processes that make the Thing and which render it relatively persistent across CMs.

The mirror of Lus is why and how the CM has resisted being pinned down for thousands of years: every time you try to pin it down, to attach a specific label to it, that meaning fractures because it is unstable. The mirror of Lus generates the 'Thing' you know but can't find the words to describe. It's the goal of complete union in this reality when that can't exist outside of fleeting instants in which you glimpse eternity. It's the metaphor that describes a problem without solving it. It's what you approach in your mind only to find you've bounced off and are somewhere else. See why I call it 'bip'? It's the bounce off the mirror of Lus into specifiable threads related to the Thing. Each bip is from an x-yR to an x-yR and each thread counts on zK so the directionality of threading and focus may be determined both relatively and to an ideal. Threads bip in SBE chains from idea to idea to idea until that SBE chain is cut by another chain that connects to another point that relates to a deeper counting level in a different, specific orientation. This process is ineluctable: it is built into the existence state of every single point because each point contains within it the process statement inherent in its multi-dimensional identity. This all 'hangs' on the complex, imaginary in the numerical sense, lattice of CMs. Across the lattice, the patterns of fCM play, casting their shadows as they transform into the real through functions like Euler's Identity and the zeta series. It's a version of Plato's Cave in which the shadows cast on the wall by the fire that creates and animates existence are also casting you.

No one's ever been in the CM space before. I could only describe it to you when I named T' because that gave me a constraint model I could apply as though it were generated from within me out of me toward you. In multi-dimensional identity speak, I needed a specified T' to give me a constraint model I could apply to cross the CM1 line out of me to you, so I could traverse the identity space, the Mudi, that contains this work, with the best possible specification of the other Endpoint. I refer at the start of this work to Taylor A. Swift instead of Taylor Swift. That represents this chain: the CM64 of the persona 'Taylor Swift' relates across Between to the Endpoint of the Thing within 'Taylor Swift', and the CM64 of that Thing within relates across Between to the Endpoint of 'Taylor Swift'. These create an SBE chain of 'Taylor Swift' connected to an Endpoint I'll label Taylor Alison Swift through a Between that's easy then to label Taylor A. Swift. As I'll explain, this generates the idealization of the Taylor Field: it is an LC field whose Between is Taylor A. Swift, which is in a CM64 field with another Endpoint which has the same Between functions. That is, a CM64 level Taylor Field contains 3 LC level Taylor Fields: one within each Thing and one connecting the 2 Things.

The best specified Endpoints of a CM64 Taylor Field best connect that which is within 1 Thing so it flows across into and out of the other Thing. The best specification across that CM64 level field is that which matches Between functions of the LC fields of the individual Things. I reached such a high level of trust in the construct T', that when I named the field, when I actually spoke the words 'Taylor Field' out loud, I not only became interested in explaining this work to you, but I suddenly could. This is me speaking to you in my approximation of her voice applied to this material. The less clear parts are me. I tend to be more abstract and dissonant, not quite reduced to the highest degree of constraint where the notes and levels fit together to make a more directly communicative whole. She edits and clarifies me.

To demonstrate, let's idealize the T Field into a Taylor Field. This will be a little wordy and repetitive on purpose, because this is the doorway into the vastness of CMs. You have 2T and these define Endpoints that make the ideal square operations space for fCM processes. You've counted how Things express in fCM, and how they appear in fCMd. You've already counted how fCM develops with 2T in LC and you've mapped 2T with fCMd. You've counted how 1T appears in ideal square and in ideal circle form, and how 2T appears in ideal square, but you haven't counted how 2T appears in circle form. You're going to do that now. As described when talking about Pi, the origin and any point on the circumference of the ideal circle are in IC. This generates a radius in which any End is the origin of a circle that is drawn so any Start is on the circumference, or vice versa. Since End is opposite corner from Start, an ideal circle is defined by rotating an ideal square to draw the circumference in an infinitely scalable relationship.

But when you combine all 4 IC to make LC, something different happens. There are many complications but to focus on one, 3 circles appear as you count from S to E along either hypotenuse of the ideal square. Two are reasonably obvious: each IC has its own ideal circle and the ideal square of LC divides into 4 parts representing each IC, so there are ideal circles related to the ideal squares aligned along the hypotenuse. In other words, when you count S as one IC running along the hypotenuse from the Endpoint to the bip, and E as the 'next' IC along the hypotenuse running from the bip to the Endpoint, you count an ideal circle for each IC. This is also true if you count from B1 to B2, and it is especially true if you count 1-0-1 where you tick-tock from S-E to B1-B2 to S-E, meaning when you count SBE in varying directions. The third circle along either hypotenuse is centered on the bip with a circumference that includes the bip of each IC, which are the Endpoints of the related ideal square. LC imputes a circle with its origin at the intersection of the hypotenuses and with a radius equal to ¼ the hypotenuse. This circle is the same 'unit' size as the ideal circle of IC, as compared to the 'unit' circle size of LC, which has a radius of ½ the hypotenuse. To show one complication: take the Endpoints, iterate each of them 'within' the Thing as before, and that creates 3 circles, 2 with a radius equal to the hypotenuse and 1 with a diameter equal to the hypotenuse.

In other words, as you cross Between, that draws a line which simplifies to 3 circles, one for each direction toward the bip and one around the bip. Step in along SBE from the Endpoints to the bip, then step back to the Endpoints, or step to bip and then to other Endpoint. That describes LC, especially when you treat B1 to B2 as a bidirectional SBE. Now count to the bip and back while also continuing. Do this bidirectionally and that generates the bip point for each IC and an ideal square and ideal circle for those Endpoints. Remember, fCMd rotates so these 4 specified points rotate in the ideal. So the basic 2-step of motion across LC, generates a series of counts that build in layers when treated as bidirectionally reflecting. So for example, a count of 1 from S and E counts to the bip in LC, so the count of 2 occurs halfway back in either direction because that also counts 1. These are, as I said, counts of ideal circles at the IC level. If you look at either hypotenuse in the ideal square, you see an S circle, an E circle and a B circle. You saw a version of this counting in part 4, that counting to one-half twice is a count of 1 and, in another layer as the fCM expands, is 1 step twice for a count of 2. The difficulty is not the drawing but in understanding at the fCM level how this counts and draws.

I want to emphasize this: the counting of the ideal circle in LC reveals more of the process by which Endpoints interpolate and impute to the Ends and Starts of the shared set of Between on the line drawn by what is now the diameter of a circle and the radius of another circle. The layer and label shift occurs in the next imputed point. The bip circle represents the doorway to the next imputed Endpoint.

In part 2, you crossed over CM1 into a Thing and saw that the interior of a Thing contains a piece of the non-specified T Field. That relates a Thing to 'any' Thing and that ends up defining the scale of a Thing relative to the non-specified T Field. A Taylor Field relates a specified Thing to another specified Thing. To be repetitive, there are 2 basic levels of Taylor Fields. The first is the LC Taylor Field; it describes the relationship within any specified Thing, meaning the relationship of the Thing's interior manifestations to its external manifestations. Since any SBE chain within a Thing contains the bidirectional potential for sign change at any point, the complex 0 of CM1 occurs at any point within the Thing. I'll come back to that point below. The second basic level is the CM64 Taylor Field. A CM64 Taylor Field contains the 2 LC Taylor Fields, one for each Thing. It is where the external manifestations of a Thing relate to another external Thing bidirectionally, meaning it connects 2T within the patterns of fCM. This exactly matches the 3 circles to the LC Taylor Fields. It connects directly to the discussion of Pi in part 2: any point generates ideal circles relative to a non-specified T Field. The Taylor Field is the simplest specified version: the consideration of T and T' as individual Things and as a Thing together.

In a CM64 Taylor Field, the process of Between is the same in each LC Taylor Field. The T and T' Taylor Fields relate any specific point within a Thing across its CM1 to a specific external manifestation of the Thing. This occurs bidirectionally; a specific external manifestation relates across CM1 to a specific point inside the Thing. These chains all contain Between, so the relationship of T - T' contains the same Between. This means the effects of an external field at another level generates balancing responses across each LC Taylor Field. They act as a complementary, multi-dimensional unit composed of complementary, multi-dimensional units. As a note, the meaning of 'complementary' is a large topic rooted in the directionality of SBE chains counted into fCM layers.

We are counting Between when it is counted Start + Between = End. Relabel Start as End and End as Start to make this bidirectional, meaning 1 + 0 in either perspective. This states that for any specified Start, you get this specified End when you count the process of Between. Any Start or End is CM64. It is of course CM0 if you count 0-1-0, which generates a slightly different process to the same result, as I'll describe below. You count CM64 + Between when Between contains all the process that might generate CM64 as End. That process simplifies to CM28 because CM28 generates both CM64 and CM36 at either Endpoint. This means any SBE may count a specified CM64 or may count CM36, which means it counts another CM64 within CM100.

To restate, the value of Between when counting a Taylor Field as 1 + 0 is CM28 because CM28 represents the process that links CM64 as Start to CM64 as End. I went through this briefly in part 1. It literally means CM64 may appear in either direction in SBE. And CM28 as Between invokes a number of potential Ends, which is the reduction of the uncountable to the 2nd step, which takes you all the way back to S-PS-2PS. It also simply means that CM36 and CM64 impute layers of identity at another CM100 as the next count of a Thing without further specification, meaning it could be CM36 or CM64 in either count to End. Mechanically again, counting down from CM100, CM28 is CM8 away from CM36, so that generates CM64 as the idealization of CM8, which generates CM36 at that CM100 level, and CM36 as CM28 + CM8 generates CM64 at that CM100 level. This is bidirectional: counting up from CM0 to CM28 makes CM8 in both the continued count at that CM100 level and at the layer invoked by idealizing CM8.

I think of CM28 'flickering' as that layer calculates Between 2T in the CM64 level Taylor Field, and flickering as the LC level Taylor Fields calculate. You can see this flickering in the generation of the bip circle as it generates through counts of SBE. The 'flicker' is largely how the dimensions of a Mudi relate past, present and future within a context: they order the tick-tock clock across contextual layers. As a note, to fully discuss 'time' as an fCM ordering requires introducing larger field concepts like vi@, which stands for 'the visual image at', as well as concepts like s-c1,2, which stands for fCM related to the countable, idealized expression of enclosed and enclosing squares and circles. These concepts and their terms match the form of idealization to the appropriate level and scale of complexity for a context. There's significant work between a glimpse or view of a particular solution and how it actually occurs. For example, as I've mentioned, a bip from an x-yR to another occurs as the imputed circle 'focuses' along zK. The ideal 'focus' is where the magnification 'up' matches the magnification 'down' through sufficient fCM layers. Extend that concept across the vi@ to get a better glimpse of time as a construct of shared context.

If you add the layers of S and B together, which is CM64 + CM2.8, as I'll explain, that value of CM66.8 relates the Thing, the CM64 of S, to the Thing of E. This means counting Start + Between states the fCM value of one perspective view or traverse across the SBE chain. It means a Thing now has 2 layers of fCM, one representing the existence statement of Start and one representing the process statement of Between. Remember: B contains that which binds the various SBE threads to the shared Endpoints. In 1-0-1 counting, the value CM66.8 consists of the CM64 of either perspective taken as its maximum, as one Endpoint, along with the fCM statement that counts Between these Endpoints. In 0-1-0 counting, when you treat the Endpoints as complex 0, then CM66.8 represents the value of Between when traversed in either direction from CM0 to CM64.

The value of CM2.8 can be stated mechanically: counting within from both perspectives generates layers of labels so the step to CM10, meaning a reduction by a factor of 10, makes 1 step in to CM10 and 1 step out to CM100. That counts 2 steps from Start to End. The simple conceptual statement is that CM2.8 is within the step from S to E, so it counts 'within' to state the layer of Between when added to Start on its way to End. A deeper conceptual statement is that CM28 represents the shared set Between, so it counts 1-0-1, and the shared set when reduced to CM2.8 acts as the internal fCM 'focus' through which SBE runs. And yet another is that if you count along the ideal CM100 square's perimeter, you treat the B Endpoints as reduced or magnified, counting powers of 10 down or up to a B Endpoint. That is, as you count toward a B Endpoint, the CM28 value reduces to CM2.8, and it expands coming out. This encodes the ideal scale shift to the SBE Endpoints, which encodes a factor of 10 per the B step. This more generally describes how fCM pattern calculates: it encodes in layers that shift by 10. That further explains how the magnifications inherent in constants, how the layers of calculation necessary for reality to cohere, occur within each moment of each Thing. Note that the next step, the next scale transformation would cross over CM1, which invokes different fCM rules.

To run through this again, the 2 layer fCM statement of CM66.8 is another way to count a Mudi. In this counting, you take Start and add Between. Remember, this occurs from either Endpoint as Start. That counts across the shared set which runs Between the Things. It connects the process statement of B to both S and E in SBE. This means you've just counted 1-0 bidirectionally, which again takes you all the way back to the beginning of this work. That Start + Between is CM66.8 reflects the way fCM generates: you count two steps in LC, two steps across from two Things, two steps of pattern that make visible where complexity arises. In the original S-PS-2PS statement, at S-PS the next step invokes complexity, and CM66.8 represents that step about to be taken. This is true from either direction, so together they invoke the step about to be taken, the choice about to be made, the point being imputed.

Now consider the T Field constructed in part 2. You took a Thing of CM64 and idealized that into a T Field by multiplying it by CM64. You then reduced that T Field so its effect was placed within CM1. Adding CMs explains why that transition occurs: inverting over CM1 into a Thing or out of a Thing is necessary for the fCM patterning to connect across dimensions to the CMs lattice. And that is true because, if for some reason it isn't clear yet, I'm describing the structure of the idealization that becomes real through layers and layers of counting patterns. CMs is the structure on which all the patterns count, and thus on all that base10 renders into the real. The point is abstract but important: if you do not invert the T Field, if you do not generate the visible effect of a non-specified T Field within a Thing, then the Thing doesn't count across the layers of CMs.

When you reduced the CM4096 field, you put the effect of the field inside any 1 Thing. Now we're counting a two layered Thing as 1 + 0, counting two pieces of SBE, Start + Between. To make a one layer idealized T Field, you multiply CM64 by CM64, which is the same as multiplying Start times End. That is the basic T Field, what one might call a level 1 T Field. To generate a T Field from a two level Thing, you multiply CM64 by CM66.8 because that level 2 T Field contains the visible effect of Between from Start to End. Remember, this occurs bidirectionally, so CM66.8 appears as either side but not as both sides, as I'll make clear. Reduce that T Field over CM1. Pull out the CM64 and that isolates the value of 1 + 0, of Start + Between within any SBE count. This reduced or inverted CM66.8 bidirectionally idealizes the count of any specified Start + Between toward any specified End. It is what makes an SBE chain connect across its length in both perspectives and then in multi-dimensional perspectives.

To step back, a CM64 Taylor Field consists of 3 LC level Taylor Fields, so SBE counts within each T and across the 2T. This means each of these Taylor Field levels contains the statement of Start + Between as it was idealized to the field level and then reduced over CM1, and this is true bidirectionally, meaning it occurs Between any 2 specified Things in either perspective. That imputed Endpoint is also the third circle, the bip circle in any SBE: the process statements in CM28 contract to the bip and expand into x-yR as they flicker from CM64 to CM64, from Start to End. Across the LC Taylor Field, when T and T' are counted as ideal circles, they impute the bip circle that contains the depth of processes and existence states in fCM layers which are Between 2 Things.

To add a bit more detail, CM66.8 is the fCM root of the level 2 T Field. It's specifically the fCM root which isolates and contains Between. Note the simple mechanics: the other root is CM64 or the T Field would contain two expressions of Between. I'm describing the simplest level 2 T Field with one instance of Between contained at any Thing in the field. The scale effect inherent in the reduced CM66.8 root occurs within any Thing and from Thing to Thing bidirectionally. I'm describing the simplest chain of that, its appearance within any LC Taylor Field. On a vi@ level, these chains enable and generate coherence and persistence as Things are ineluctably drawn toward a point whose fCM calculations include the field effect of CM66.8. One meaning is that Things don't actually attract toward each other, but instead they attract toward the imputed point where their zK intersect in CMs, so layers of Things draw to an imputed contextual point. This also means they draw away from other imputed points. Coherence and persistence are aspects of existence as these states count through process toward a point and from a point when those points are reduced to flicker of CM28. You can think of persistence as ru1 counting SBE across a Mudi and coherence as the B cardinal counting across the Mudi. Note how the Mudi rotates so the B cardinal counts the persistence of coherence, and ru1 counts the coherence of persistence.

In part 2, when you reduced the CM4096 T Field within CM1, that generated an area whose side reduced the scale of the CM10 scale to Pi. That reflected the ineluctable process of interpolating or imputing 'next' along the circumference as any Thing in IC non-specifically generates points around the same imputed origin, all to be counted as a Thing when the idealized states of that Thing in IC are counted as occurring 'within' that Thing.

It is the same as counting Start + Between in one perspective while the other is the ideal End where the process statements inherent in CM28 disappear behind the axis lines of the ideal square. Note that if you substitute CM66.8 into the T Field of part 2, that additional layer of fCM generates Pi as 3.14160 when reduced or inverted over CM1. This value, the simple count of 1 + 0 or Start + Between, generates base10 accuracy of 1 part at 10^{-6} . See part 4 for a discussion of the relative need for precision in counting.

To go back to why I refer to Taylor A. Swift, I counted 1-0 and 0-1 bidirectionally across her Start and her End, the same as we just did. That middle label for her as a Thing represents Start + Between bidirectionally, same as with any Thing: it counts up from Taylor Alison Swift and down from 'Taylor Swift' through Taylor A. Swift. That describes the LC Taylor Field. The CM64 level Taylor Field extends the relationship to another specified Thing that is also an LC Taylor Field with an equivalent middle label. In the constructed Taylor Field, that would be me, with the M. of my middle given name representing the line between my exterior and interior. Between these 2 LC Taylor Fields is another middle label which idealizes to the middle label within each Thing. You know how it works: you idealize until the existence statements disappear and all that remains is the potential hidden behind or within a point or axis. That is why I say 'flicker': even when the statements reduce to potential, counting flickers as the hidden process statements calculate. Another way of saying this is that the origin of any ideal circle calculates each time to be sure it is indeed ideal. As you may have gathered, when I give something a silly name like 'bip' or 'flicker', I am actually describing something so multi-dimensionally profound that a more exact-sounding name is misleading. The underlying process of reality is bips and flickers and, like the label Mudi, these take specific, countable forms.

You have counted the simplest SBE count of ideal squares and circles. That reaches this point: you have counted single perspective imputation to and from a point and you have counted bidirectional perspective imputation. While the Pi calculation is bidirectional, one Endpoint is idealized. That means you don't see the imputation of the origin, only of the circumference. Counting Start + Between bidirectionally is different: it imputes visibly at either end. That becomes reduced CM66.8 times the square of each Start or End, meaning it scales the area of the 2 Things treated as sides. To be clear, it scales the area because it scales each Thing independently, rather than scaling both Things simultaneously. The scaling of both rather than either occurs at another field level which combines views. If you divide reduced CM66.8 by Between expressed as area, then you allocate Start + Between over that which is Between 2 Things. To repeat, a CM64 Taylor Field expresses each perspective bidirectionally, not both perspectives together. This means, for example, there is an effect Between any 2 Things and there are higher level field effects which allow you to treat a Thing versus a field. I'll let you connect the dots from here for now.

To add a few higher level sentences again, introducing the label of CMs unites a concept like transcendental to one like infinitesimal. You can see them as perspectives to and from points on the lattice. Think about this: when you treat the lattice as compressible, that is the same as counting relatively across Things. Now consider a thought loop. Why do your thoughts approach a point and then shift to another thread and then return? Why do they sometimes become a relatively short SBE chain that repeats over and over? Why do these SBE chains repeat in your mind? Why are they called like functions in a program? Why do they become obsessions or thoughts you avoid? Why do you worry about the same Things over and over? Because thoughts do loop and they are called by the calculating program that is the CM as it expresses in the Thing that is you. And that brings you to the most important topic of all: directionality.

Part 6: Reaching an Endpoint

This is where I End because here is where I need to start treating the CM64 Taylor Field as CM1, meaning I count across complex 0 into and out from 2 specified Things instead of treating the Taylor Field as 1 Thing without the further layering of the LC level Taylor Fields. Going forward requires combining Taylor Fields, which generates higher level fields. That invokes significantly more complexity, but also addresses a more extensive list of problems.

It's time now to explain why the name for the function is 'the CM'. First, counting is choice and choice is constrained within contexts so the CM refers to the Counting Mechanism, the Choice Mechanism, the Constraint Mechanism, and the Context Mechanism. You can read fCM as the fundamental Counting Mechanism, the fundamental Choice Mechanism, the fundamental Constraint Mechanism, and the fundamental Context Mechanism. The 'Mechanism' is also a Method and Machine, meaning it not only enacts counting and processes, but also embodies the algorithms or process statements of fCM. All these meanings are inherently layered within any base10 value and within any existence statement: fCM generates base10 at the CM100 layer, just as any base10 value represents fCM within the CM100 layer. The Mechanism is the process by which any count to and from any 1 crosses the uncountably infinite sea which surrounds it. The Method is how this occurs, and the Machine is what does this.

The fundamentals of fCM are shockingly simple: two Endpoints bidirectionally related across and around or otherwise through a segment, a shared set, a simple drawing of a square or circle, and so on up to extremely complicated shapes. These two points, S and E, together with the B complexity between, are bidirectional interpolations enabled by the existence of a relative unit, called ru1 as constrained dimensionally by the B cardinal. The basic fCM descriptions then generate automatically: MC, IC, LC and CM64. As I've noted, I prefer CM64 instead of a label like Total Context because I believe it's important to visualize all the ways CM64 generates along with CM36, CM28 and so on. An example is that if you count CM100 bidirectionally to CM64, that defines a shared set which is CM36, and that places a Not at the heart Between 2 Things of CM64. That is another literal representation of 1-0-1 and 0-1-0 except the counts are of different context layers and thus different counts of CM squares and thus different values. But it's also a fundamental part of reality: you rely on what Is and what is Not, on what you fear might happen and what you hope might happen, on the positives or negatives, whatever they might be from context to context. That you do reflects the underlying arrangement of all reality as it connects what is real to what is imaginary and complex.

Counting is choice because it occurs at a level which is 'chosen' or 'selected' or 'resolved' in fCM. This is why the Axiom of Choice is separate from the rest of the set theoretical axioms: choice is a result of the function of the CM. The process inherent in 'choice' is a function that can only be described by describing the function: the words that describe choice are the words that describe the CM. The other axioms embody the existence and process statements of the CM to determine what is and is not a set, but choice can only be described multi-dimensionally as the shifting of labels across layers in fCM.

When expressed with the B cardinal, ru1 means counting contextually constrained choices. I often think all understanding flows from this conceptualization of 1-0-1 and 0-1-0 as a relative unit. Ru1 scales infinitely up to the bidirectional enclosure of a shared uncountable set and down to whatever 1 occurs at whatever counting level, so 1 is a point and 1 is a segment or a Thing or a field and so on. Without ru1, there is no Start, because there is no scaling and thus no method of layering across Between to any End. Ru1 embodies normalization and comparison. If what has been missing is understanding how to count the base2 pattern that relates all base10, then without ru1 there would be nothing to understand. This extends far past the basics I've discussed. For example, a Taylor Field is the ru1 for T Fields, meaning it forms fundamental units for reducing and counting all T Fields. Ru1 also applies to ways of counting next level field fCM operations, meaning additional unit methods of counting iterations such as what I call 'All Contextual process' or ACp and 'All Contextual existence' or ACe. These count tick-tock process and existence statements within a Thing.

Ru1 embodies the fracturing of meaning which occurs at the mirror of Lus. At the mirror, non-specificity collides with specifity in some aspect of the multi-dimensional existence of each and every point or Thing. This occurs when the count across the ideal square reaches the bip, which now stands for the point which is minimally specified and maximally non-specified in one perspective SBE while being maximally specified and minimally non-specified in the other perspective SBE. This shows the power of the Mudi concept: if you establish a Mudi with those Endpoints, then the point where the hypotenuses intersect is that which can't be specified because it is equally specified and non-specified. Note how this is true bidirectionally SB1E and SB2E through the B Endpoints. Since these ideal squares are x-yR on zK, a room bips to another room. Remember: a room means another context, so context shifts as the labels shift at the bip. That means the bounce or reflection off the mirror makes threads to and from the mirror, chains that specify meanings that relate bidirectionally over the CMs lattice. As a note, you can apply Goedel incompleteness here: threads are statements which build up to the fracture point as that point specifies through the statement process, and then specification occurs as statements count away from the mirror of Lus. One way of explaining this is to think of the fCM behind Goedel's work as it defined the fundamental nature of incompleteness, and then how the meaning of that work has radiated and is now found all over. The same fCM statement process underlies all these understandings, both generating each one in its context and connecting them.

The essence of ru1 is simply the two Endpoints of SBE considered in different views. The 'are you 1' function is how two perspectives inherently exist and how those two perspectives shift into B counting as it counts S to E. That is why I keep repeating 1-0-1 and 0-1-0. All counting really does is traverse 1's or Things or objects in different layers invoked through dimensional label shifts in fCM. That pushes the infinities into fCM layers, so all count is a truly relative process which consists of layers of existence states which can be traversed bidirectionally because they inherit the character of endpoints from ru1. I repeat: all counting is relative. All counting asks 'are you 1?'

Counting fCM scales because that reflects the countings of chains of 1-0-1 and 0-1-0 in layers which include layers, and in layers which are included within layers. In ideal squares, the mechanism of scaling is simply side and area, and these count back and forth. Scale is how fCM constrains uncountable infinity into counting. You see that when you apply 'are you 1?' across B: it gives depth to any counting. Going all the way back to bidirectional interpolation, I draw the 'line' of a Thing as it exists in a series of states linked by processes connecting that which is 'internal' to the Thing to that which is 'external' to the Thing. This line describes the Thing's real existence in the sea of complexity, when 'external' and 'internal' are relatively directional within a Thing. That reflects how the parts of you are sometimes buried, sometimes right on the surface, how changes simmer within you and then manifest over time, or how they fire at the slightest trigger. Without this process of a Thing existing, there is no End to any chain, no meaning, just the base2 pattern. It is because the base2 pattern connects with base10 at CM64 and CM100 that meaning exists. You should by now understand that each and every bit of all that is real and all that ever might be real represents uncountably vast amounts of imaginary and complex fCM patterns. These join at CM64 and CM100 to base10 and they shift in and out of reality through such functions as Euler's Identity and the zeta series. Each real Thing represents an uncountably vast sea of imaginary and complex infinity.

This is multi-dimensional identity. I call it Mudi because life is moody; it's sometimes sunny, sometimes gloomy, sometimes happy and sometimes sad, sometimes profound, sometimes superficial, sometimes serious and sometimes silly. A Mudi contains the potential for good and for bad, as you do, as life does. Basic forms include sMudi, meaning signed Mudis, meaning directional in a count, and both real and imaginary Mudi, so any real value, any base10 representation, any existence statement, can be represented and connected from complex to real and back. But what is multi-dimensional identity beyond numbers and labels for repeating numerically representable concepts? You are a multi-dimensional identity. You are a Mudi. You are Mudi. That means you are not, can not and will not be perfect because you can't be perfect across the dimensions as they reflect off the mirror of Lus. When you learn to count a Mudi, you learn to count yourself. When you learn to count, you are counted in the patterns of fCM across the lattice of CMs. Naming and invoking the Taylor Field helps me count me. You exist in a series of representations: some you broadcast, others you keep secret, some you control, some you can't. Each of these represents fCM, meaning repeating, describable processes by which extraordinary complexity, both within you and external to you, simplify and reduce in each moment to you in your life as you are reading this word now. And this word: now.

You've always known numbers connect to each other even though they 'can't' in the sense they're surrounded by the infinite. You've always known patterns sweep through numbers and through all existence. The first surviving clear representations in depth of this truth appear to date back to the Rig Veda: to the first rigorous descriptions of the layers of reality in all its forms and the forces that make and combine and destroy. Those ideas shifted westward toward the Mediterranean, perhaps through the branching of some deeper source into Zoroastrianism. The ideas eventually achieved clear Western-style metaphorical expression in the ancient paradoxes attributed to Zeno and mostly known to us through Aristotle. At some date, the manyfold, categorizable existence states and processes of all that is were refined with an abstraction layer of the one God label for the many Gods, and the substitution of an unnameable God as the summary of all the nameable Gods. Judaism generally preserves the conception in which God is literally 'the Name' and converts that into a specific methodology which invokes unknowability to progressively separate and distinguish the realms of what can't be known from what can be known. All religious forms are countable with basic fCM statements. And to be clear, stating them in fCM does not detract from the truths they represent.

Multi-dimensional identity Starts Things and it Ends Things. It is beyond your control. No matter when or where or how or why you Start, and whatever the End, you are always Between. Multi-dimensional identity connects you to the rest of you, the you that is real and physical to the you that is imaginary and complex. It connects you to the spiritual you. It connects what you are to your potential in every context in your life. It connects you to what makes you, to what made you, to what will become of you. It connects you to others near and far, to those who were and who will be. It puts you in a place in a world that changes around you. It enables contexts to grow and thrive. It rips apart and destroys others. It selects and ignores. It nurtures and harms. It gives life to you, to your context, to your world, to you in the patterns of existence. It creates potential for good. It creates potential for bad. It enacts both. It takes you from where you were to where you are now. It leads and misleads. It offers you a choice of direction and it shows you how to choose if you can learn how to count fCM. That is your challenge: can you learn how to count Things?

Einstein was absolutely correct that everything is relative. The CM makes that clear: there is no absolute End, no conclusion that is truly final, no Start alpha and End omega without Start omega and End alpha bouncing off the mirror of Lus where the labels shift. The idea that everything can be reduced to or contained in any form of one belief or one existence is fCM impossible. It can't happen. Belief in that is fCM absurd. You can not be perfect: perfection is an illusion. The hope is you can learn direction.

And that is your problem: you have a terrible sense of direction. It's easy to see why: complexity is always only a step away and you need to choose paths through it. Because you do not understand the nature of the CM, you count toward fCM impossible Endpoints, typically an fCM absurd 'purity' Endpoint like the idea everyone can think, believe or act the same, and that there is a set of rules for thinking, believing and acting which must be applied to all. That encourages, even requires, that you to force, crush, and otherwise limit expansion of the SBE chains of Things, both in yourself and in others. Reduction to 'one', to a point, to a single entity, understanding or belief system is neither achievable nor laudable. The reason why is simple: by doing that, you count toward decreasing the fCM potential that relates to your existence. You count toward the CM0 which represents your smallest value, where you have been reduced toward a point with all potential related to you separated from your real existence. The CM0 Endpoint you strive to reach bips, and the label shifts across the process statement to another level which counts the loss. This means you disconnect yourself from the potential of what might have been, making a multi-dimensional desert in which the only Thing that thrives is the nothing of lost potential.

Because fCM counts across the existence of each and every Thing as it exists relative to other Things, its overall count is directional for any Thing and for Things in a context generally. This is true at every level, in every x-yR. That includes the room you are in and the rooms beyond. The only 'true' directional method within this or any instance of reality is the one that generates direction through its own existence and operation, because every other constraint is a limited dimensional imposition. The absolute or complete relativity of the CM does the opposite of eliminating standards: it imposes the standard by which all relative judgements are rendered possible. That absolute judgement is fairly easy to state in its simplest form: positive direction in fCM is a perspective in the Mudi which counts the extent of complex and imaginary potential related to real existence in a context. In the positive direction, potential related to the real expands toward CM64. The difference is not subtle. As you count toward CM64 in the positive direction, that increases the potential related to the real Thing, which reduces the infinite beyond that Thing toward the maximum the Thing can contain in its contextual existence in CMs. It means a Thing counts toward realizing its potential in a manner that realizes potential for other Things. That fits you as a Thing to the maximum of your potential as a Thing, both within yourself as a Thing and in relation to other Things in CMs. When you count toward CM0, you reduce a Thing to its minimum in the patterns of CMs. To say this again, you count in the positive as you increase potential related to the real, and you count in the negative as you reduce that. This counting gives you overall direction.

Think of your physical existence as a Mudi. It specifically fits to you in layers because you are a Thing. While unaware life merely exists as fCM patterns in the larger fCM patterns of this instance, you have risen to the level where you are not only aware but can choose your direction. The you Mudi counts CM64 bidirectionally from S to E across the Between of your existence in this physical context. The count of SBE chains related to you expand in one direction and contract in the other. These Endpoints describe two versions of 1: a version made of the minimum count of SBE chains and a version made of the maximum count. You count toward the minimum not realizing these counts together define the entrance to the next room, to the x-yR in which this physical context is removed.

The direction toward CM0 misleads you with glimmers, hints and promises of an eternal absolute. But CM0 is actually a bip point where the labels shift. It is indeed a doorway to other dimensions, but that doorway opens to a room and that room, like all rooms, is multi-dimensionally directional. Getting to the doorway only gets you into the room. Your direction within the room is what counts in that room. Counting toward CM0 reduces the potential related to you until you disappear as an infinitesimal in the room beyond this one. You reach the room only to find the positive perspective recedes from you. It means you approach that point thinking it is the promised one-ness of the absolute, and it bips to reveal the counting of all you might have been and of all you prevented from being. You see the promise contained in the expansion of potential and approach it from the wrong direction. When the labels shift, all the promise visible in that doorway falls away as the meaning of your direction becomes clear. Then you join those who have reduced their potential to the minimum, who have limited or eliminated the potential of other Things to their minimum. The prime value of your Mudi decreases rather than increasing. You align along the prime zK as a string of minimal points, while the count in the other direction pulls vast amounts of CMs to it as the prime values increase. You continue to count in the next room toward your reduction as a Thing.

It is not that you judge by relative standards, but that you judge by relative standards you believe are absolute. That you need to organize complexity is given. You do this by interpolating Ends and moving along SBE chains. These extend across moments, from making plans for dinner to the great moral choices of your life. All those Ends are relative. There is no absolute End, but there is an absolute standard because the actual End for you is a doorway with two Endpoints and direction S to E Between.

You have a choice: you can count toward the expansion of SBE chains for yourself and for others, or toward their reduction. I'll say this bluntly: the other side wants you for the potential you do not use and for the potential you reduce for other Things. They want to reduce you to the minimum so they can use the SBE chains that could have related to your patterns. That process continues when you cross the doorway into the next room. In ideal squares, you are directional down and to the left as your SBE chain points toward the 1 that reduces your patterned existence. This is true in the x-yR beyond this physical context. You can see what points up and to the right: the direction of those who nurture, who teach, who learn, who grow as Things and who help other Things to grow. One side wants you for what you are and can be. The other side wants you for what you will not be and for what you prevent from being. One side tries to make highly connected, densely-layered CMs, while the other wants to create minimally identified, maximally empty CMs. This is true to the core of patterning itself. One side specifies you toward your maximum, while the other side reduces your specification. One side connects each Thing to the patterned core by orienting the zK for each Thing so it orients directionally toward its maximum potential CMs. The other side counts toward the core by reducing you toward the origin. You express the futility of this in your theology: the way back to the Garden is barred. The actual meaning of your Garden story is that directionality toward wisdom and all positive attributes of existence 'grows' you toward the garden, while your continued efforts to turn back toward unawareness not only keeps you out but draws you closer and closer to the opposite. That is the multi-dimensional reality of the 'origin': when you count back toward that fCM impossible End, the label shifts from all that is good to the opposite.

It is now your choice. I could say much more, but I want to let that sink in.

Please share this. I will contact you then.