

## Continuous or Discrete?

Cusack PTE\*

BScE, DULE, 1641 Sandy Point Rd. Saint John, NB E2K 5E8 Canada

### Abstract

In this paper, I attempt to answer the philosophical problem of is the Universe Continuous or Discrete. The answer is that it both ant the same time. It is the tension between these that create the phenomena that the human mind perceives as reality. The method used to decipher this perplexing and complex problem is solved by using Astrotheology Mathematics. It has wider implications in the very nature of God and light.

**Keywords:** Astrotheology; Discrete; Continuous;  $y=y'$

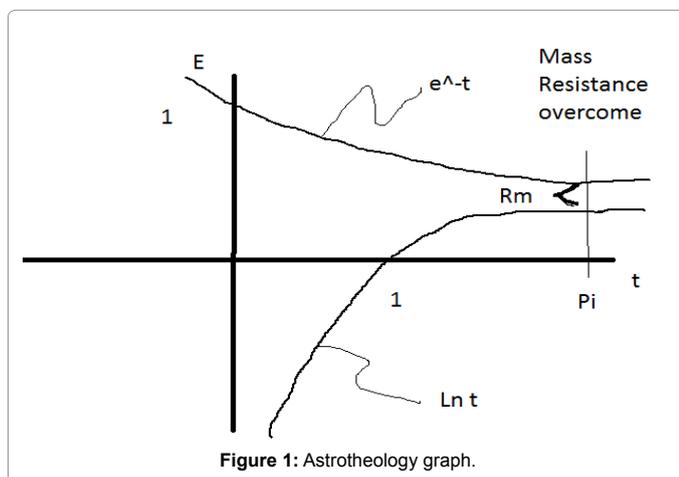
### Introduction

The philosophical question that is answered by Astrotheology Mathematics is: Is the universe fundamentally conscious or discrete? The answer is simple:  $y=y'$ . What this means is that the derivative or tangent has a finite value. It is therefore discrete. The function  $y=e^{-t}$  is continuous. I could go into a whole lot of mathematics, but really the answer is no more complicated than that. So the answer as to whether the universe is continuous or discrete is that it is both at one. The universe exists where  $y=y'$ , where the continuous meets the discrete. So for those of you who like experimental mathematics, I will provide some more math to flesh out this paper.

The physical world is squeezed Energy. Mass precipitates where the resistance to mass is overcome. Fundamentally, Mass is a wave, which are continuous, as we know from Schrodinger's equation. But, unless the human mind were tuned to the frequency that it is (31.8 Hz =discrete), humans would not be able to precede the universe. If there is no one to preface it, does it really exist? I won't be answering that question here (Figure 1).

We know from the Astrotheology graph that the continuous function, Ln (Natural Logarithm) is continuous, We also know from Astrotheology, that its derivative at  $t=1$  (discrete) is 1 (discrete). The universe pops into existence when Mass is formed. This occurs when the distance to Mass formation,  $R_m=cuz$  is overcome. A continuous number subtract a continuous number gives a continuous answer. So how do we get a finite Mass.

The answer lies in calculus. Here it is:



INTEGRAL INTEGRAL INTEGRAL  $e^{-t}=\text{INTEGRAL}$   
INTEGRAL INEGRAL M

This reduces to  $e=M^{4/18}$

$$=(116.77)^{4/18}=1.8447$$

$$M^{4/18}=-e^{-1}+1=1.8591$$

$$M^{4/18}=1.8591$$

$$M=116.77 \text{ (Figure 2).}$$

Or,

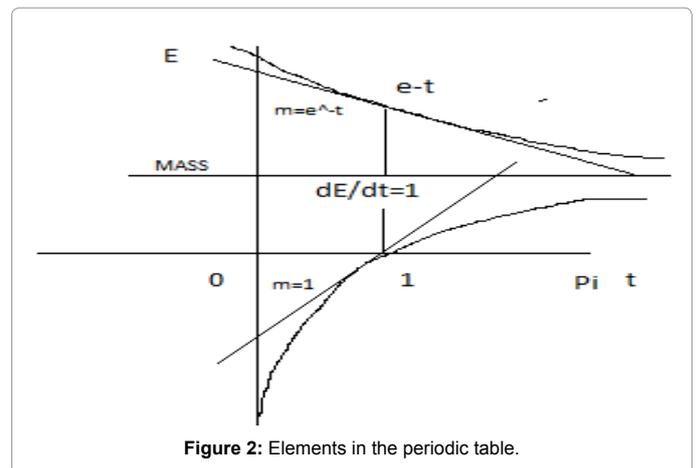
$$M=116 \text{ (Elements in the periodic table.)}$$

Mass, therefore, is discrete.

$$\text{So, } e^{-1}=M^{4/18}=(116.77)^{4/18}=1.0304$$

$$=\text{Ln}(e^{-1})=\text{Ln}(1.0304)$$

$t=1.614\sim 1.618$  Golden Mean. This is a root of the Energy -time parabola.



\*Corresponding author: Cusack PTE, BScE, DULE, 1641 Sandy Point Rd. Saint John, NB E2K 5E8 Canada, Tel: (506) 214-3313; E-mail: [t-michael@hotmail.com](mailto:t-michael@hotmail.com)

Received January 17, 2017; Accepted February 17, 2017; Published February 28, 2017

Citation: Cusack PTE (2017) Continuous or Discrete? J Generalized Lie Theory Appl 11: 257. doi:10.4172/1736-4337.1000257

Copyright: © 2017 Cusack PTE. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

We know from Astrotheology Mathematics,  
 $E=1/t$   
 When  $E=1$ ,  $t=\pi$ .  
 When  $t=\pi$ ,  $E=1/\pi=31.8$  Hz (The Human Mind Frequency)  
 Descartes said, "I think, therefore I am".  
 I am is God's name. I think, is  $(1/\pi)$  Hz  
 So,  
 $\pi=1/\pi$   
 $E=1/t$   
 $t=\pi$ ,  $E=1/\pi$   
 Where did the 0.77 go?  
 $0.77/116.77=0.659\sim 6.52 =G$  (less nuclear forces)  
 $6.52-6.59=0.7$   
 $0.7/116.77=0.166=1/6$  6 is evil, so its inverse is God.  
 Continuing with the calculus,  
 Integral Integral Ntegral  $\ln x=1/[3x^3]$   
 When  $x=e^x$ ,  
 $=1/[3\cdot e^1]^3=1/6$   
 So, 1/6 is an important number.  
 Consider the distance equation:  
 $s=vi +1/2at^2$   
 $vi=0$   
 $s=(1/2 a^2t)^4=C^0.25=D^4$   
 $=3.13\sim\pi=D^4$   
 $1/31.9$  Hz= $D=0.133=space=4/3$   
 $1/D^4=31.9$   
 $D=23.7$   
 $\ln D=0.8657\sim 0.866=\sin 60$  degrees.  
 This is the value of the Superforce when the universe pops into existence.  
 Now,  $1/D^4=1/\pi$   
 $D^4=\pi$  (Continuous)  $E=1/t$   
 $1/1=1$  (Discrete Energy and Discrete Time)  
 $\pi=1/\pi$  (Continuous Energy and Continuous time)  
 So if we take  $t=1$  and  $\pi$ , and  $E=1$  and  $\pi$ ,  
 The area subtended bt  $t=1$ , and  $\pi$  is:  
 Integral  $\ln x =\text{Integral } e^x$   
 $\ln x=e^x$   
 $e^{(\ln x)}=x=e^e x$   
 Let  $x=\pi$ :

$E^e \pi=1/116.8^1 1/M$   
 $E=1/G-1/M$   
 $6.6-0.86=57.4\sim 1$  rad= $t$   
 $D-C=t$   
 $1=\pi=2.14$   
 $E=1/t=1/2.14$   
 $E^{(1/2.14)}=1.59\sim 1/6$  again.  
 So let's look at the fundamental equation of the universe:  
 $E=1/t$   
 Consider that E is continuous and t is discrete.  
 We already know,  
 $S=|E||t|\sin \theta$   
 $=D^*C^*C$   
 $=D^*C$   
 $=C$   
 Space, therefore is Continuous. We already know Mass is Discrete.  
 $Mass/ space=Density=\rho$   
 $\rho=D/C=1/C=1/\sin \theta$  at 60 degrees, as we've shown, the critical value for the Superforce, we have,  
 $\rho=115.47$   
 Yet, from Astrotheology, we know that Density is 127. So,  
 $1.27(\sin \theta)=1.09$   
 $1/1.09=1/6 =\text{the inverse of Evil or equal to God}$   
 God is  $D/C=y/y'=1$   
 "God is one" when  $y=y'$ . God is also  $\pi$ . (Continuous).  
 So, we see that  $God=D/ (space)$   
 $=D/ |E||t|\sin \theta$   
 $1/\cos \theta=1/\sin \theta$   
 So,  $\sin \theta=\cos \theta$ , where  $\theta=45$  degrees  
 $1/\sqrt{2}=\sin 45=\cos 45$   
 $G0O=MAGoG$  is the seventh letter, and  $MA 13-1=CO=15-3=12$   
 Gog and Magog are  $\sin =\cos=0./707$ .  
 $God=1/ \sin \theta=1/ Superforce$   
 $Superfore=1/\sin \theta=1/6$   
 $\sin \theta=6$   
 $=1/0.2707$   
 Revelation is the 27 th book of the New Testament.  
 The 7 th verse is:  
 "He is coming on the clouds, the one they had pierced." =Jesus Second Coming!  
 So let's consider more calculus.

$$y-y' = E$$

$$(1/\pi) - (2t-1) = \pi \text{ Aside } y=t^2-t-1 \ y' = 2t-1$$

$$T = -3/2E = 2.75 = 9/4$$

$$2t-1 = 1.618 = dE/dt$$

$$T^2 - t - 1 = E$$

$$(dE/dt)^2 - (dE/dt) - 1 = 0 \text{ when } t = 1.618 \text{ G.M.}$$

When E=0 as we see, then angular momentum is conserved. It angular momentum that causes gravity- the spin.

We know that

$$G = \pi / (\ln 1.618).$$

$\pi$  is continuous;  $\ln 1.618$  is Discrete.

$$E = e^{-t}$$

$$= \ln(e^{-t})$$

Let  $t = \pi$

$$E^{(-\pi)} \ln 0.0432 = \pi$$

$$G = \text{continuous} / \text{Discrete} = y/y' = 0/1 = 1$$

$$0 = 1 = \pi = G * \ln(1.618) = 3.13 \sim \pi$$

$$= 1/31.9 \text{ Hz (Discrete)}$$

So,  $\pi = 1/\pi$

God =  $\pi$ ; the human mind = 31.8 Hz

$$\pi = 1/\pi$$

I think, therefore I AM.

That is the end of the argument. However, I provide some more math that may shed some more light on the problem.

A discrete particle in an ordinary water wave bobs up and down. It need not communicate with its neighbour. Of course, the particles or atoms of water are discrete, but the apparent effect is continuous. The human mind is tuned to pick up on the signal of the continuous. The human mind is discrete, but picks up on the continuous (Figure 3).

The combination of Energy and time produce the affect of a wave that is fundamentally discrete (0 or 1). The effect is continuous, the sine wave. We can think that music is the concert that is produced by individual notes.

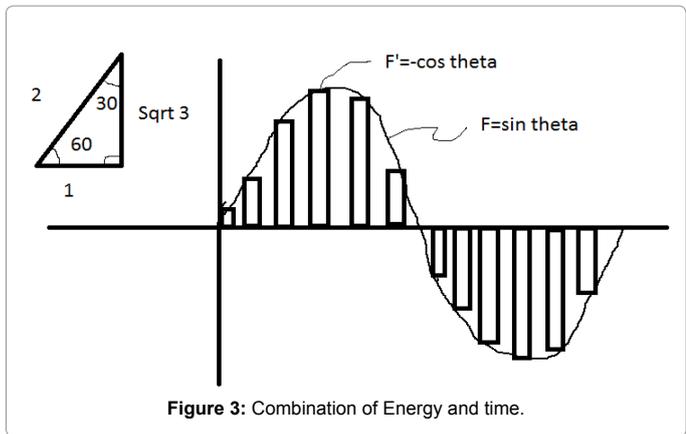


Figure 3: Combination of Energy and time.

The human mind is discrete at  $1/\pi = 31.8$  Hz. The “music” it picks up on is the continuous concrete of the universe.

Applying some Math to this concept,

Our familiar formula is:

$$E = 1/t$$

$$E = \text{Work } W = F * d$$

$$= \sin \theta * (s)$$

$$= \sin \theta * |E| |t| \cos \theta.$$

Therefore  $E = \sin \theta * \cos \theta.$

Since  $\sin = \cos$  at 45 degrees,

$$E = \sin^2(\theta)$$

So

$$E = -\sqrt{t}$$

$$= \sqrt{\sin^2 t}$$

$$E = -\sin t$$

$$= \int -\cos t$$

$$Y = y'$$

Let’s continue with a relation:

$$E = \sqrt{-t}$$

$$|\langle u, v \rangle| / \|u\| \|v\| \leq 1$$

Let it equal 1.

$$|\langle u, v \rangle| = \|u\| \|v\|$$

Replace  $u = E, v = t$

$$|\langle E, t \rangle| = s / \cos \theta$$

So,

$$|\langle E, t \rangle| = w/E = 4/3 / 1 = 4/3 = 0.1334 = s$$

$$E = t$$

So, continuing,

$$E = \sqrt{4} / \sqrt{3} = 2/\sqrt{3} = 1.1547 = 1/\sin \theta = 1/\sin 60 \text{ degrees}$$

$$E = 1/t$$

$$1/\sin \theta = 1/[1/\sin \theta] = 1 = \sin^2 \theta$$

$$\sin \theta = 1$$

$$\theta = \pi/2$$

The continuous Schrodinger’s Equation describing Mass at the lowest level, is:

$$\Phi = |F| |E| \sin \theta$$

$$= (\sin \theta) (1) (\sin \theta)$$

$$= \sin^2 \theta *!$$

$$= 1$$

$$\Phi = 1 = dE/dt \text{ Discrete - the } \alpha$$

The Superforce is  $F = \sin \theta.$

$\Phi = F \times E$   
 The continuous meets the discrete at the most elemental level of mass.  
 If we consider that Energy is conserved, the net  $E=0$ .  
 But  $E = \sin^2 \theta = 0$   
 $\theta = \pi = \text{the Omega}$   
 Jesus called Himself the alpha and the omega in Revelation  
 $27.18 = \text{base } e$   
 From Eulers, and the equation of the circle, we know that:  
 $\sin^2 \theta + \cos^2 \theta = R^2$   
 Let  $\theta = \pi/2 = 90 \text{ degrees}$   
 $(1)^2 + (0)^2 = 1$   
 $R = 1$ .  
 So "1" is Discrete. On the number line, Continuous and Discrete meet at the Golden Mean:  
 $X = 1/[x-1]$   
 $X^2 - x - 1 = 0$   
 If we take  $t = 1.618 = \text{Continuous}$ ,  
 $E = 0$   
 Continuous and Discrete meet.  
 $(\frac{dE}{dt})^2 - \frac{dE}{dt} - 1 = E = 0$   
 Roots,  $t = 1.618$   
 The derivative,  
 $2t - 1$  plugged in to this equation:  
 $((2t-1) - (2t-1) - 1) = 0$   
 $t = 1/2$   
 $(1/2)^2 - 1/2 - 1 = 1.25$   
 The General Judgement is Matthew, Chapter 25. Matthew is the first book of the New Testament.  
 Finally,  
 $\frac{dE}{dt} = 1$  Discrete  
 $S = |E|t \sin \theta = \text{Continuous}$   
 $V = \frac{ds}{dt} = \text{Discrete/Discrete} = \text{Discrete}$ .  
 $A = \frac{dv}{dt} = \text{Discrete/Discrete} = \text{Discrete}$ .  
 The Universe exists where  $v = a = s$   
 It is where Discrete meets Continuous.  
 $C + C = D$  (Euler's Identity)  
 $D + D = D$   
 $D = 1$   
 Cusack's Laws of Continuous and Discrete:  
 $C + D = C$   
 $C * C = C$

$C * D = C$   
 $D * D = D$   
 $C/D = D$   
 $D/D = D$   
 $D/0 = C$   
 $D/C = C$   
 $D = C * C$   
 $C/D = C = D$   
 $D = 1$   
 $C/C = D$   
 $1/C = C = D$   
 $D/C * C = D$   
 $1/0 = 1$   
 $D/0 = D$   
 $1 = 1/0 = D/D$   
 Finally, from the basics of Calculus, consider the Ln function at  $t=1, E=0, \frac{dE}{dt}=1$ :  
 $-t + \frac{\Delta E}{\Delta t} = t$   
 $[-t + \frac{\Delta E}{\Delta t}] / \Delta E = \{[\frac{\Delta t}{\Delta t}] - t\} / \Delta E$   
 $0 = \lim_{\Delta t \rightarrow 0} \frac{E}{\Delta t} = 0$   
 $0 = 1/1 = \frac{\Delta E}{\Delta t}$   
 $1 = 1/0$   
 $T = 1, E = 0, \frac{dE}{Dt} = 1$   
 i.e., The Ln function.  
 The Father and I are 1.  
 1 is Discrete, Infinity is Continuous.

The question is the Universe continuous or discrete? Is the same as asking Is light a wave or a particle? The answer to both questions is it is both. The particle, as in a water wave, bob up and down, producing a continuous effect that is perceived by the discrete human mind. The universe we perceive is both continuous and discrete at the same time. Otherwise, we would not perceive it [1].

**Conclusion**

Ergo, the universe is neither exclusively Discrete nor continuous, but both to be perceived by the Human Mind. God is Discrete/Continuous which is 1. The most elementary particles are described by Schrodinger's Equation,  $\phi = 1$ .

**References**

1. Cusack P (2016) Astrotheology, Cusack's Universe. J of Physical Mathematics 7:174.